BUREAU OF EDUCATION, INDIA.

PROGRESS

OF

EDUCATION IN INDIA

1912—1917

SEVENTH QUINQUENNIAL REVIEW

VOL. I

00134414

H. SHARP, C.S.I., C.I.E.

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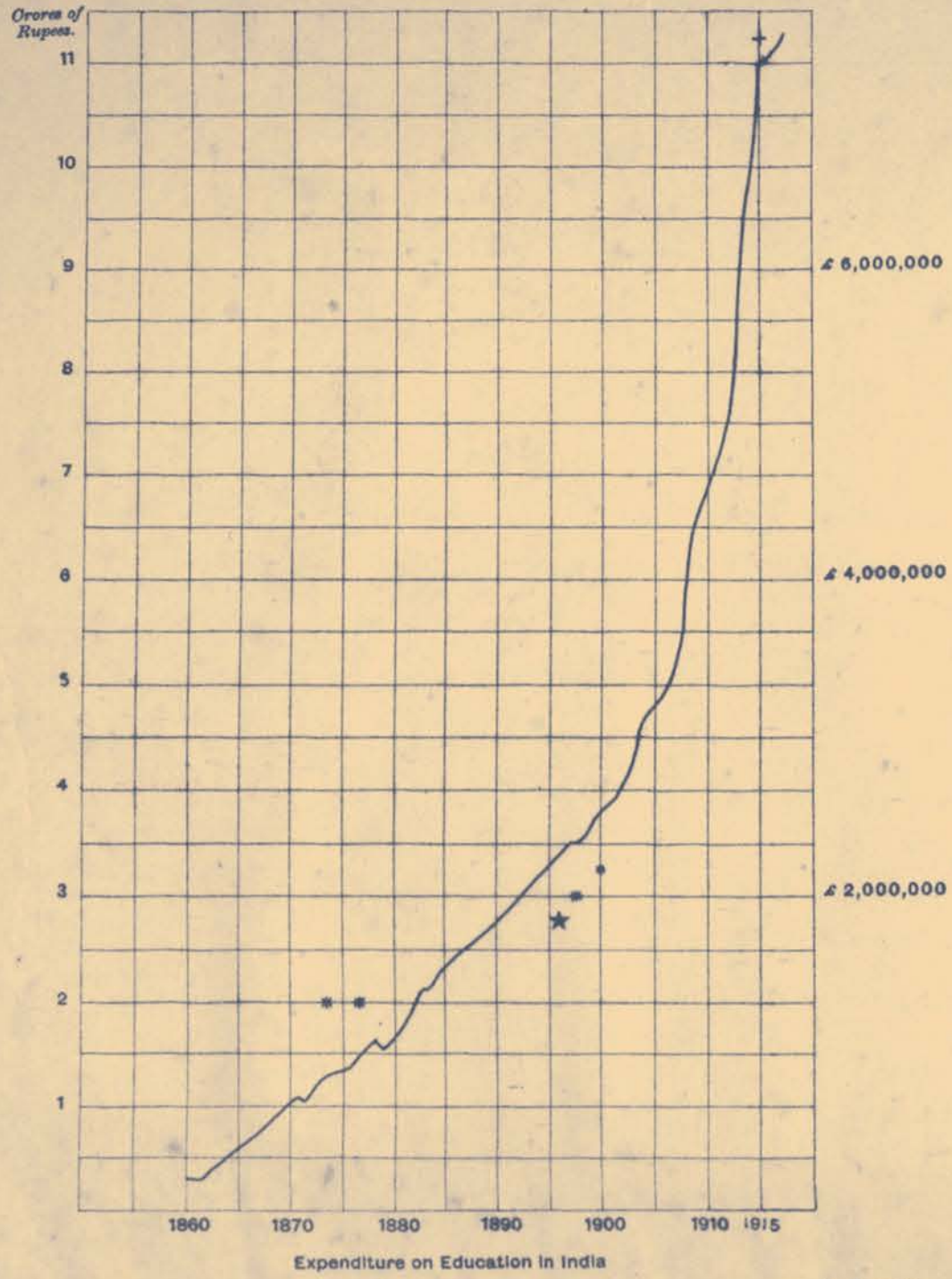
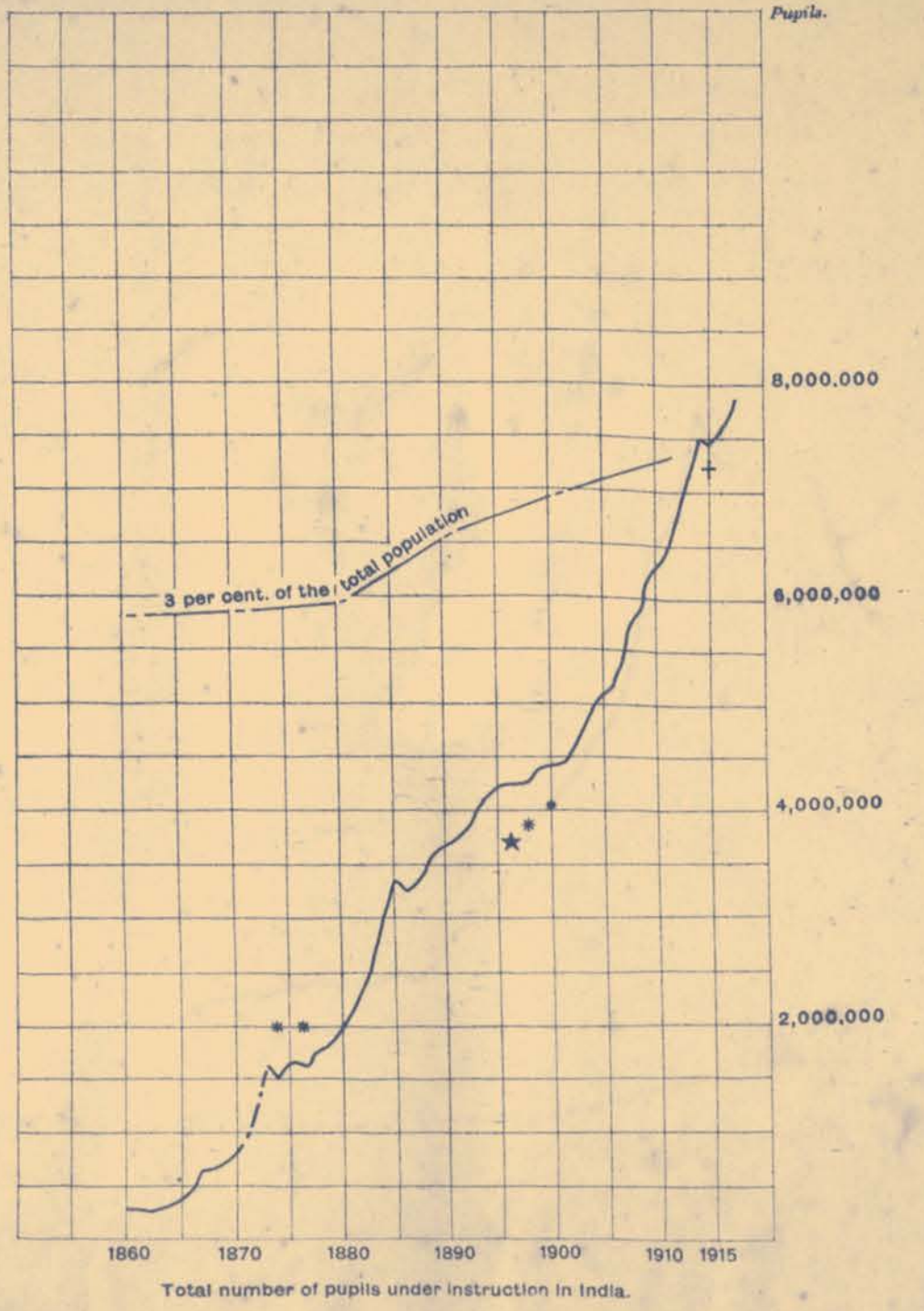


Expenditure on Education in India



Total number of pupils under instruction in India.

* Famine
★ Commencement of Plague
\+ Native States omitted

Fig. 1.

Fig. 2.

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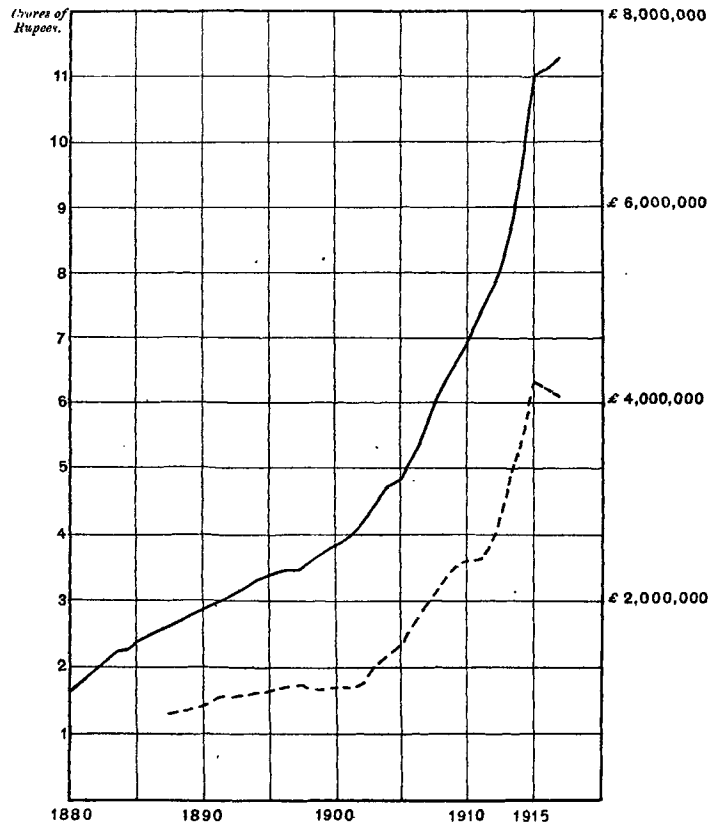

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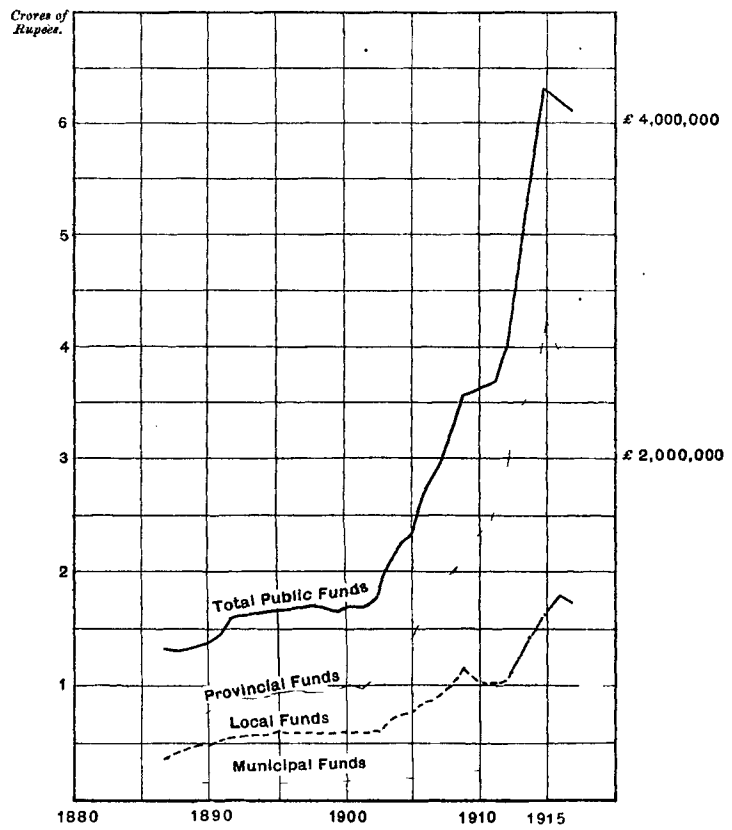

Fig. 4.

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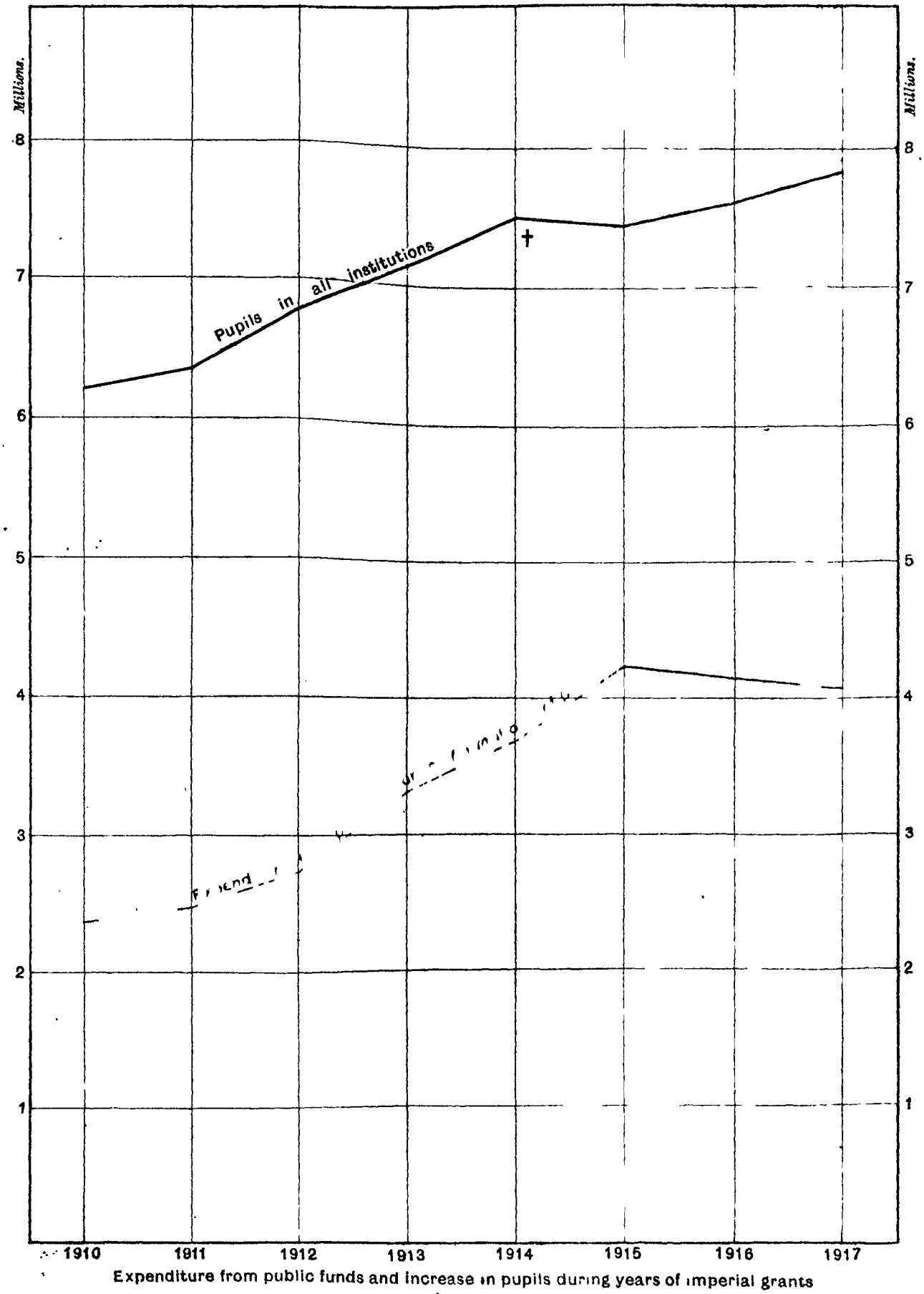

Expenditure from public funds and increase in pupils during years of imperial grants

† Native states omitted.

Fig 5.

No 2571-3500

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BY

H. SHARP, C.S.I., C.I.E.

SEVENTH QUINQUENNIAL REVIEW

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INTRODUCTION.

The production of an elaborate report at the present time requires some justification. This volume reviews the progress in education of more than 244 millions of people over a period of five years. It treats of the systems which exist and the different developments which have taken place in fifteen provinces or administrations each of which has its own characteristics. It endeavours to condense the reports received from those provinces and from universities—reports which aggregate some 1,260 pages of letterpress, exclusive of statistical tables and appendices. More than this, it deals with a subject the interest in which has been stimulated by the war in this as in other countries, and which has here assumed a peculiar significance owing to the pronouncement made on the 20th August 1917, by His Majesty's Secretary of State for India. In a country where little more than three per cent. of the population is undergoing instruction, the promise of responsible government as a goal and of a substantial instalment thereof as an early step, at once raises education into the position of a factor of more than ordinary importance. It is necessary to take careful stock of the position. Though every endeavour has been made to curtail the narrative and though the review is shorter than any of its predecessors, the stock-taking has proved a lengthy business.

Endeavour has also been made to issue the report in good time, and before the figures have fallen out of date. Various causes have conspired to delay its publication. One of the university reports was received only on the 27th May 1918. The printing has been delayed by the strain of work in the press. Nevertheless, there seems reason to hope that the distribution will take place at least not later than in normal years, and possibly earlier.

The period reviewed is from the 1st April 1912 to the 31st March 1917. The area and population are slightly less than those dealt with in the previous review. The figures of certain Native States, previously included, are now omitted and the description is confined to those portions of India which are styled British India, *i.e.*, those directly administered by the British Government. At the same time figures for three administrations (Ajmer-Merwara, Baluchistan and the station of Bangalore) have been added.

With slight modifications of the chapter arrangement, the plan of the review generally follows that of its predecessors. Some of the appendices, which appeared not to be of general interest, have been omitted from volume II. Some new facts and figures have been collected—concerning the distribution of building expenditure, mission schools and contributions, the finances of local bodies, municipal institutions, the pay of teachers not in government employ, secularised indigenous schools, etc. This has entailed some additional labour on the compilers of provincial reports, to whom my gratitude is due.

The reports on which the present review is mainly based are the work of the following officers :—

Madras	Mr. R. G. Grieve, M.A.
Bombay	The Hon'ble Mr. J. G. Covernton, M.A., C.I.E., F.R.N.S.
Bengal	The Hon'ble Mr. W. W. Hornell, M.A., C.I.E.
United Provinces . . .	Mr. J. J. W. Allsop, I.C.S.
Punjab	The Hon'ble Mr. J. A. Richey, M.A.
Burma	Mr. S. W. Cocks, M.A.
Bihar and Orissa . . .	The Hon'ble Mr. J. G. Jennings, M.A., assisted by Mr. G. E. Fawcus, M.A.
Central Provinces . . .	The Hon'ble Mr. A. I. Mayhew, M.A.
Assam	Mr. F. W. Südmersen, B.A.

North-West Frontier Province	Mr. L. Tipping, M.A.
Coorg	Mr. R. M. Savur, B.A.
Delhi	Written in the office of the Chief Commissioner, on information supplied by the Inspector of schools, Ambala Division.
Ajmer-Merwara	Mr. E. F. Harris, B.A.
Baluchistan	Mr. J. R. Cornah, M.A.
Bangalore	Mr. S. A. Steele, B.A.

Reports were also received from the five affiliating universities. The all-India general tables were compiled, as usual, in the office of the Director of Statistics. The sections on education in medicine, agriculture, forestry and veterinary science were prepared, the first by the Director General of the Indian Medical Service, the others under the supervision of the Revenue and Agriculture Department. They were slightly modified and curtailed in harmony with the remainder of the report.

I have to thank the various authorities, especially the directors of public instruction, who have looked through the proofs of most of the chapters and added valuable facts and suggestions. I also acknowledge the assistance received from the Bureau and the zeal with which Mr. G. R. Kaye, F.R.A.S., the Curator, has supervised the statistical work and the other heavy tasks connected with the production of the review.

PROGRESS

OF

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1912—1917

CHAPTER I.

CHARACTERISTICS OF INDIAN EDUCATION.

Growth of the present system.

1. The prevailing system of education in India is partially founded upon the indigenous system which existed in the country before the consolidation of British power. But it will be seen from what is said at the commencement of chapter II of the sixth review that even the elementary or vernacular schools have undergone considerable modification and expansion since the time when Mr. Adam wrote his reports on education in Bengal and Bihar.* As to higher education, its scope and character underwent a total change when Raja Ram Mohan Roy inveighed against the Sanskrit system of education as useless and Macaulay wrote his Minute of 1835. From that time Sanskritic and Islamic lore largely gave place to western science and thought. The spirit of the times did not encourage the East India Company to undertake any responsibility for the education of the territories which they ruled. The Directors' Despatch of 1854 first recognised and indicated the duties of government and their limits and laid the foundations on which Indian education has since been built. The Education Commission of 1882, the Indian Universities Commission of 1902, the Resolutions of 1904 and of 1913 modified the policy to suit the exigencies of a later period but preserved the original outlines demarcated in 1854.

General uniformity and provincial variations.

2. In a country where physical and climatic conditions vary so greatly as in India and which contains so large a variety of races, it is inevitable that different provinces should gradually develop different systems of administration and therein of instruction. One of the great difficulties connected with writing any review of education in India is the variety of detail which characterises the provincial systems. Nevertheless the policy of 1854 has in its main features withstood the influence of place as well as of time; and, under a number of codes and systems which at first sight appear perplexingly varied, it is possible to discern the same essentials of structure. Were this not the case, the tables which form the second volume of this review and the statistics which figure in the narrative itself could not have been compiled. It is not pretended that the same designation of a school or of a course connotes precisely identical characteristics in every province. But on the whole the terms used in one province answer fairly to those which are used in another and it is possible to institute comparisons and contrasts of sufficient accuracy. Any attempt to impose over the whole of India a single iron-bound system would be doomed to failure. The central government confines itself to the consideration of educational problems in their broadest

* These are to be found in an edition compiled by the Reverend J. Long (Calcutta, 1868). This book is difficult to obtain. Much interesting information founded on Adam's reports is contained in Vol. II of the Calcutta Review, 1844.

aspect, to large financial matters and similar subjects. Each province has built up and administers its own system.

Control.

3. The question of control is fully dealt with in chapter IV. Local Governments have departments of public instruction. These administer, carry out inspection and provide the staff for the small number of government institutions. But education is mainly in the hands of local bodies (rural boards and municipalities), associations and individuals. This is in accordance with the definite policy of government, pursued since the despatch of 1854. In some provinces the control exercised is very light and nowhere is there any law compelling either a child to attend school or a teacher to take out a licence. The authority of government is shared as regards higher education with the universities, as regards lower with the local bodies. Less than a quarter of a million pupils are educated in government institutions; over $2\frac{1}{2}$ millions in institutions managed by boards or municipalities; nearly $4\frac{1}{2}$ millions in privately managed institutions; and over 600,000 in private institutions which are outside the general system of public instruction. The great majority of privately managed institutions are in receipt of aid from government or from the local bodies.

Classification of institutions.

4. The broadest division of educational institutions is that which classes them as public or private. Public institutions are those in which the course of study followed is that which is prescribed or recognised by the department of public instruction or by the university and which satisfy one or both of these authorities that they attain to a reasonable standard of efficiency. They are open to inspection, and their pupils are ordinarily eligible for admission to public examinations and tests held by the department or the university. All other schools are described as 'private institutions.' The majority of institutions are now public. Private institutions are for the most part purely indigenous schools in which are taught Sanskrit, Pali, Arabic, the Koran, etc.

Public institutions are again divided into publicly managed and privately managed. Publicly managed institutions are those under the direct management of government or of a local or municipal board. Privately managed institutions are those which are managed by societies or individuals. Privately managed institutions are ordinarily sub-divided as aided and as unaided. An aided institution is one which receives a subsidy from government or from a local or municipal board. Unaided institutions are financed solely from fees, endowments and subscriptions.

5. The division of educational institutions according to standards follows that which is ordinarily found in other countries. The primary school educates the child from the time he commences his studies (which may be at five years of age or upwards) in the 3 R's and a little geography, nature study, etc. The instruction is wholly in the vernacular save in some provinces where a little English is taught in some of the classes. The total length of the course is ordinarily five or six years and is sometimes divided into the lower primary of four years and the upper primary of one or two years. The bulk of the pupils, however, do not study beyond the lower primary standard or its equivalent and the actual length of school life is about four years. The middle school is of two kinds—the middle vernacular school, in which English is not taught and which in reality is rather a continuation school than the lower section of a secondary institution, since it leads on to no higher standard; and the middle English school, which contains the first two, three, or four stages of a secondary course of instruction. It is to be remembered that in India a stage or a class ordinarily indicates the work which will be completed or the standard in which a pupil will remain during a period of one year, although of course this is not an invariable rule. Above the middle school comes the high school, which again consists of two, three or four stages. The high school may, and in most provinces does, contain not merely the high but also the middle and even the primary classes. Similarly a middle school may contain primary classes. Secondary English schools, whether middle or high, continue the teaching of the vernacular and hence are called Anglo-vernacular schools.

Colleges are classified as second grade or first grade, according as they teach only up to the intermediate or up to the degree.

6. The double classification of public institutions is shown below. The first diagram indicates classification according to management.

Publicly managed	.	Government. Local Board. Municipal.
Privately managed	.	Aided by Government or a local or municipal Board. Unaided.

The next diagram shows classification according to standard, the periods indicated against each standard being averages only.

School.

Primary	Lower	5 or 6 years.
	Upper	
Middle (English or Vernacular)		3 years.
High		3 years.

College.

Second grade (intermediate)		2 years.
First grade	B. A. or B. Sc.	2 years.
	M. A. or M. Sc.	1 or 2 years.

It thus appears that from start to finish the course for a student who pursues the arts or science curriculum occupies 16 to 18 years. If he commenced at five years of age, he would thus attain the B.A. at about 20 or 21. The periods of time shown against the school stages are only typical and do not apply to all provinces.

Scholarships.

7. The scholarship system carries a pupil on from one grade of institution to another. It includes government, endowed and board scholarships. Endowments are ordinarily made for university study. Lower primary scholarships in Bengal and Bihar and Orissa are paid by boards. It is possible for a boy to proceed from the highest lower primary class, where he may earn a lower primary scholarship of ₹2 or ₹3, gaining in successive stages an upper primary, a middle scholarship (which carries him through the high classes), a junior and then a senior college scholarship, all of increasing value up to about ₹25 a month, till finally he may win a post-graduate scholarship of ₹100 or more. The award is sometimes made, especially in the lower grades of scholarships, on a consideration of poverty as well as of merit.

Separate scholarship systems exist in each province. The scholarships are ordinarily distributed territorially but with widening areas of competition in the higher grades. Thus a certain number of lower primary scholarships may be competed for in a sub-division, a certain number of senior college scholarships in a division or in the province as a whole. A large fraction of the amount spent on scholarships is awarded to students in medical, technical and other professional institutions. Special scholarships are often reserved for girls, Muhammadans and backward races.

Government also awards a certain number of scholarships for study abroad.

Method of financing education.

8. Education is financed partly from public and partly from private funds. Public funds is a convenient expression for denoting those sums which are the produce of imperial or local taxation—namely, provincial, local and municipal funds. Private funds include fees, endowments, subscriptions, etc.

The revenue in India is classified under imperial, provincial and divided heads. The Government of India appropriate the produce of certain taxes; that of others is retained by the provincial Governments; that of others again

is divided between the central and the provincial Governments. The revenues which are taken by the Government of India are utilised partly for imperial expenditure, such as defence, and partly for redistribution to provinces, where provincial revenues are unable efficiently to finance those administrative objects which are classed as provincial heads of expenditure. Among these is education. The tables in volume II show no imperial expenditure. The cost of government institutions, government officers and government grants is met from provincial revenues. This, however, does not mean that imperial revenues contribute nothing. Considerable assignments have of recent years been made from imperial to provincial revenues for the express purpose of enabling local Governments to expedite educational progress. But these assignments, once made, are classed as provincial revenue.*

Local and municipal funds are the produce of the cesses and various forms of impost which are levied by local bodies, together with government contributions and the income from other miscellaneous sources. These are used for the purposes of local self-government such as sanitation and education. Just as imperial funds are used to supplement provincial, so too provincial funds are allotted to local bodies, sometimes for unspecified objects and sometimes for a particular purpose, *e.g.*, a scheme of town-planning, a waterworks or the improvement and extension of education. Money so allotted is shown in the tables as local or municipal funds.

The history of an allotment of money may be traced. The Government of India give to a local Government half a lakh of rupees recurring for primary education. The local Government adds in the same year one lakh recurring from its own resources to the sum it has previously spent on this object. The whole addition to the education budget, consisting of $1\frac{1}{2}$ lakh, is shown as provincial revenue. As primary education is the care of local bodies, the local Government decides to give the bulk of the money to local and municipal boards. It distributes to them in the course of the year $1\frac{1}{4}$ lakh, which is henceforth classed as local or municipal funds, and is disbursed by these bodies (perhaps with some further addition from local cesses) to their own staff of teachers, as aid to privately managed schools and perhaps partly in the erection of new school buildings. The local Government spends the remaining quarter of a lakh direct upon enhanced facilities for training or inspection, which are essentially charges on provincial funds and some increase of which is required by the additional number of schools to be opened by the local bodies.

Fees in government institutions are credited into the treasury. In board or municipal schools they are credited to the local fund or, in some cases, are left in the hands of school committees for expenditure on the spot. In privately managed institutions they are kept by the committee or proprietor of the institution, the maintenance of which is defrayed from them direct, together with such grant or subscriptions as the institution can command.

Comparison of the numbers under primary and secondary education.

9. The most striking feature of Indian education is its top-heaviness. From the point of view of mass education India is behind most countries that lay claim to civilisation, as is shown by the following examples† :—

	Percentage of the population enrolled in elementary schools.
United States	19·87
England and Wales	16·52
German Empire	16·30
France	13·90
Japan	13·07
Ceylon	8·94

* It may also be explained, as regards general table IV, that it is compiled from provincial reports and does not include the cost of the Education Department in the Government of India.

An item in the total which requires some explanation is that of miscellaneous charges. It covers hostel charges, items incurred in connection with libraries and manuscripts, the cost of examinations, etc.

† Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, pages 1 and 668—672. The figures, save for India, are not fully up-to-date.

	Percentage of the population enrolled in elementary schools.
Rumania	8·21
Russia	3·77
Brazil	2·61
India	2·38*

At the census of 1911 only 5·9 per cent. of the population was found able to read and write.

10. The case is very different with higher education, especially that of a literary type. If India is far behind many civilised countries in elementary education, she can hold her own with them as regards numbers under higher education. The following figures of secondary education will suffice.†

	Percentage of the population enrolled in secondary schools.
United States of America	1·502
German Empire	0·988
England and Wales	0·62
India	0·486
Japan	0·354
France	0·32

The percentage for India is much raised if only the male population is considered. Of the female population, only 0·086 per cent. is enrolled in secondary schools; of the male, 0·869 per cent. On the other hand, nearly half of the pupils in secondary schools are reading in primary stages. But they are preparing for higher education and are often studying English as a second language. Such pupils are probably to some extent included in the figures of other countries. Some again are enrolled in middle vernacular schools, which can be termed secondary only in a qualified sense. But even when allowance is made for these facts the figures are sufficiently impressive.

11. The figures for university education too are significant. Paulsen has given the figure for the number of students attending universities in Germany and in countries of similar conditions as about 0·05 per cent. This has been held by some to be an under-statement, and the figure for that country appears to be 0·093 per cent., for England and Wales, in 1914-15, 0·054 per cent., for France 0·106, for Italy 0·063, for the Netherlands 0·066, for the United States 0·218 and for Japan 0·014. These figures must be received with caution; the total for England and Wales (26,800) probably includes many part-time students; that for Japan probably excludes students in private institutions. A more recent work on education gives the percentages as rather higher save in the case of the United States and France where they are given as lower.‡ The figure for India is 0·024. This suggests comparative backwardness. But, when it is considered that the female population may be practically disregarded in calculating the amount of university education in India, and that the percentage of the Indian population engaged in professions, commerce and other walks of life which require comparatively advanced education is less than a half of that in the United Kingdom, less than a fourth of that in France, and only just over a third of that in Germany, the percentage of

* This applies to primary schools, not to the primary stages of secondary schools, etc., which if reckoned in would bring the percentage to 2·63. If the percentage of males enrolled in primary schools to the male population were taken, it would be 3·83 and similarly with the addition of primary pupils not in primary schools it would be 4·25. These figures refer to public institutions, if pupils in elementary private institutions be added in, the percentages are higher (see paragraph 254).

† It is difficult to find accurate figures of secondary education. Those here given are collected from various statistical sources. See, for example, the Report of the Board of Education, Whitehall, for 1908-09. The latest report of the Commissioner of Education, Washington (1916), makes the figure for the German Empire in 1911 considerably lower (0·506 per cent.) and that for England and Wales considerably higher (about 0·9). The same publication gives 0·398 for Japan and 0·350 for France.

‡ The report of the Commissioner of Education, Washington, for the year ended June 30th, 1916 (which is still more recent than the work alluded to in the text), gives 0·0817 for the German Empire, 0·0796 for England and Wales, 0·104 for France, 0·063 for Italy, 0·088 for the Netherlands, 0·240 for the United States and 0·078 for Japan. These figures are for the year 1913-14, save in the case of the German Empire, where they are given for 1914-15.

those who are receiving university education is not to be despised. Still more is this the case where a single tract like Bengal is concerned. The percentage of those under university education to the population in that presidency is 0·05—equal to Paulsen's figure and almost equal to the figure for the United Kingdom in 1912; and, if the female population of Bengal be excluded, it is 0·097.

12. Thus, while the lower classes in India are largely illiterate, the middle class, which is the class that mainly patronises the higher institutions, is, at least numerically, educated to a pitch equal to that attained in countries whose social and economic condition is more highly developed. The earlier efforts of the East India Company were directed (as was not unnatural) to the encouragement of higher institutions established in towns. But the despatch of 1854 laid special stress on elementary education, and government has continued to press its claims. The weight of circumstances has told against the best intentions. The funds available are limited. The middle class find that higher education pays and loudly make known their wants. The lower classes though no longer hostile are lukewarm and seldom clamour for a type of instruction which brings no immediate and tangible reward.

Narrowness of higher education.

13. A second feature, which partly accounts for the first, is the narrowness of the course which ordinarily lies open to the Indian student.

With a view to showing this, a comparison was made in the last review with Japan. It is here reproduced with the latest available figures.

	Percentage of pupils in different kinds of institutions to the total number of pupils.	
	Japan. 1914-15.	India. 1916-17.
Universities	0·11	0·70
High schools	1·16	7·29
Middle schools	1·65	4·49
Primary schools	87·77	77·45
Institutions for training	0·37	0·24
Technical schools	6·52	0·27
Other schools	2·42	9·56
TOTAL	100·00	100·00*

These figures are the more striking in that the pupils in high schools in Japan are mainly girls, the number in boys' high schools being insignificant. Technical schools in Japan include the technical continuation schools. The large number of 'other schools' in India is accounted for by private institutions, etc.

This comparison, as was stated in the previous review, is not accurate and must be used with caution. But, however rough be the figures, it decisively proves that higher education in India runs in a literary groove and that the development of special vocational schools is far behindhand. The genius of the country is speculative rather than practical. The literary courses lead to government employ and are a necessary preliminary to the study and practice of the law. They adapt themselves to the traditional method of teaching and to the highly developed memorising faculty which characterises so many Indian students. Technical and industrial studies entail physical exertion (though this is by no means irksome to all) and offer a less easy or less lucrative career. But the greatest deterrent is the slow growth of industries and the shyness of capital in supporting them. Were industrial employment assured, students would readily come forward and technological institutions would fill and multiply.

* The figures for India include, under universities, students in law and medical colleges, but not those in other professional colleges, who are classed partly under institutions for training and partly under technical schools. Middle schools do not include middle vernacular schools whose pupils are classed under primary schools.

14. A third feature is the unequal development of education among the sexes. Of the male population, 5·31 per cent. is under instruction of some sort and 10·6 per cent. is literate. Of the female population 1·03 per cent. is under instruction and 1·0 per cent. is literate. Female illiteracy retards educational progress. When half the population grows up practically illiterate, the incentive to education in the other half must be sensibly lowered; and, when home education is almost unknown, education in general figures as something extraneous and not as a customary adjunct of life. Moreover the education which is imparted to the male portion of the population cannot have its full effect. An artificial state of affairs is created. The youth does not find in his home the environment and thoughts that surround him in the class room. *Lack of education among girls.*

15. These inequalities in education may be illustrated by the following figures which show the amounts expended upon the maintenance of different kinds of institutions. *Expenditure on different kinds of education.*

Direct expenditure in 1916-17 given in lakhs of rupees.

	Provincial Revenues. *Lakhs*	Local and Municipal funds. *Lakhs*	Fees and other private sources. *Lakhs*	Total *Lakhs*	Percentage on total.
Higher institutions for boys . . .	82	28	239	349	44·0
Primary schools for boys	56	123	72	251	31·7
Vocational institutions for boys . . .	60	5	19	84	10·6
Institutions of all sorts for girls . . .	36	20	37	93	11·7
Other institutions (not included above) .	7	1	8	16	2·0
TOTAL .	241	177	375	793	100·0

The expenditure on institutions for girls does not represent the full expenditure on girls' education; for a considerable number of girls are educated in boys' schools.

16. The main criticism made upon courses of instruction in India is that they are over-literary. This is true in the sense that in the lower standards not much attention is paid to manual training and that in the higher the distinction has not been sufficiently firmly drawn between English as a language and English literature. On the whole, however, the criticism applies less to the actual courses prescribed than to the proportion in which different kinds of education are demanded and the methods which are employed in imparting instruction. It has already been shown that a literary form of education is that which is sought, as leading to government employ and the learned professions. *Characteristics of instruction.*

The elementary pupil in every country must devote his time during the earlier stages to acquiring the vehicles through which instruction is imparted. Owing to the early stage at which children in India leave school, little else than this is possible with the majority. The course for those who proceed further presents much the same characteristics as are found elsewhere. It is often urged that agriculture should be taught. The subject is not suitable for children in the elementary stage though an agricultural tinge may be, and often is, given to the instruction in rural schools.

The instruction given in the higher stages is certainly of a literary character. This, however, is due less to the course itself than to the preference shown for courses of this kind. Nor is it to be forgotten that science is now taught in most of the colleges and some of the schools with full equipment for experimental work. Nevertheless there is no doubt that, even with the restricted avenues of employment now open to students, greater variety of courses could be introduced with benefit. The B.A. course is not the most

suitable training for an office clerk, although the glamour of the degree makes the tradition difficult to break.

17. The method of teaching is regulated by the fact that the majority of teachers are not trained and that their qualifications are often poor. In primary schools only 65,818 teachers are trained out of a total of 219,667. In secondary schools, out of a total of 58,905 teachers, only 22,036 have received training and only 7,627 possess degrees. The result is that old traditions prevail, that learning by rote persists far into the higher stages and that the teacher adheres too closely to the book.

A second cause which militates against good teaching is the low pay ordinarily enjoyed by the staff. This is particularly apparent in unaided and in the poorer sort of aided schools, where the teacher is often only waiting for something better to turn up. Should he qualify as a pleader or should any other form of employment offer, he too often forsakes a profession to which he never meant to stick, with the result that pupils are instructed by a changing series of teachers who have not time to learn their trade and put little heart into their work. Pensionary and provident fund schemes will to some extent afford a remedy.

A third determining factor, which serves to accentuate these difficulties, is the dominance of the examination. The passing of the examination is essential for employment; and, where external examinations on an extensive scale are the rule, considerable truth is lent to the idea that the modicum of knowledge which can be acquired by a close study and memorising of the text pays better than general mental development. Here again in primary schools, where the examination is of less moment and where the children are of an age when memory plays an important and useful part in learning, this characteristic is less apparent than in institutions of higher standard.

The reports condemn this harmful influence of the examination over schools and courses. It is not that there are too many examinations, but they are conducted on a large scale, are almost wholly external, and too often form the only goal observed in school instruction. It is difficult to pluck more than a certain percentage of candidates, even if the results would justify a larger proportion of failure. Hence, says Mr. Hornell, the standard drops and more inefficient schools spring into being. This process is repeated till a multitude of inferior colleges and schools grow up, while good institutions languish, since any excellence which goes beyond the standard of the examinations or aims at producing other characteristics than a capacity for passing them, is deemed superfluous, if not positively harmful to a boy's career.

The use of keys.

18. As an illustration of the methods of learning in vogue mention may be made, at the risk of some digression, of the extent to which the production and use of keys are carried.

The use of keys is strictly forbidden in Bombay and boys and teachers found using them are severely dealt with. Nor has it reached so great dimensions in Burma as in some other provinces. In Bihar and Orissa it is surreptitious, though it appears to exist. Generally speaking, however, though condemned by the departments of public instruction, keys are produced in large quantities and often openly used in class—a practice connived at or even encouraged by the teachers. The evil seems to have reached its height in Bengal, where 1,058 keys are known to have been published during the quinquennium. Mr. Hornell states that their sale is marked by extortionate demand; for not only is the key ridiculously high priced, but, unless it is purchased, booksellers have been known to refuse to sell the original text. The key, though it may be quite worthless, is often priced more highly than the book which it is intended to annotate. The Burma report mentions the case of a simple English reader costing ten annas, the key to which is sold in two parts at one and a quarter rupee each.

The majority of these productions are not specimens of legitimate annotation but translations, paraphrases or lists of synonyms which are calculated to destroy all mental effort in the pupil save that of memory. Even the vernacular primer often has its key—an explanation of every word, no matter how easy it be or how often it recur, by one or more synonyms, some-

times more difficult than the word itself. Further, Mr. Hornell states that keys lead the student definitely astray. Indeed, errors in printing, spelling, grammar and explanation are not uncommon.

No satisfactory remedy has been suggested. The proper remedy lies with the teacher. Inefficient teaching compels the boy to resort to 'cribs.' The efficient teacher would not merely render such aids superfluous but would sternly suppress them as inimical to mental training. As it is, says Mr. Südmersen, there is a good deal of truth in the remark that even if one could succeed in preventing the use of keys by boys at school and at home, we should still have to face the fact that the teachers will continue to use them and merely dictate from them. Until the teacher improves and receives the support of public opinion, the intellectual force of millions of pupils will continue to be sacrificed to the interests of the compiler and publisher of keys.

19. Such are a few of the main features of education in India. Others will emerge in the course of this review. Those here described are of a general nature and permeate the whole system. India is often described as a land of extremes. The truth of the description is borne out by the conditions of education—a middle class widely instructed in those arts which qualify for the learned professions; a proletariat of which only a fraction is literate; a whole sex almost totally devoid of any education whatever. Elementary education is based, so far as possible, on an adaptation of indigenous institutions and traditions. Higher education is an imported product. It is popular and has undoubtedly been attended with beneficial results. As is natural with an imported product, its development is marked by some crudities and its influence has to some extent been unsettling. It has appealed to the natural intellectuality of the people and has succeeded only partially in stimulating practical application. *Summary.*

CHAPTER II

EFFECTS OF THE WAR.

20. Far removed and sheltered as India has been from the war, the educational system has felt its effects. First and foremost, the financial stringency has postponed schemes of importance, and abundant evidence of this will be found in the following pages. Local Governments were precluded from drawing freely upon the unspent balances which had accumulated with them from the imperial grants made for education during the preceding years. For two years no new imperial grants were allotted, though fresh distributions of considerable sums are being made for 1917-18 and 1918-19. Many officers of the departments of public instruction and others employed in privately managed institutions have gone to military service or are employed on duties connected with the war. Recruitment of the Indian Educational Service from England has stopped. Missions have suffered in funds and workers belonging to enemy nationalities have been repatriated. Stores and apparatus have been delayed or lost through enemy action; prices have risen and some articles are not procurable. *General effects.*

21. A list of officers and private teachers who have proceeded on military service is given in appendix I. It shows fifty-one officers of the Indian Educational Service, of whom Mr. C. Russell, principal of the Patna College, and Mr. J. E. Gately, professor in the Government College, Lahore, have been killed; four officers of the provincial and twelve of the subordinate educational services; twenty-one unclassified, of whom Mr. C. H. Line, of the Lawrence Military School, have been killed; and 179 teachers in private employment, of whom thirteen have been killed, namely, Mr. A. G. Simmons, teacher in the Abu High School, Mr. R. Crisp, Panchgani High School, Mr. T. P. Wood, principal, La Martinière College, Lucknow, Mr. S. G. Mellis Smith, professor, Canning College, Lucknow, Mr. B. H. Goldie, professor, M.A.O. College, *Educationists and ex-students on military service.*

Aligarh, Mr. J. R. Pound, professor, Christ Church College, Cawnpore, Messrs. W. G. C. Smith and J. B. Whitfield, professors, St. John's College, Agra, Mr. F. A. James, vice-principal, Colvin School, Lucknow, Mr. Blakeston, Diocesan Boys' School, Rangoon, Mr. P. Freeland, Rifah-i-Am School, Rangoon, Brother Roustan, St. Francis de Sales School, Nagpur, and Mr. W. G. Lawrence, St. Stephen's College, Delhi. No complete list of ex-students is procurable. Many such have gone on active service. The Chiefs' Colleges have contributed 42, including ruling Chiefs. Two of these ex-students, the Thakur of Panchur and Subedar Pritham Singh, have been killed. Considerable numbers of old boys of European and Indian schools have also gone to the front.

Enemy missions' schools.

22. The part played in India by enemy missions was considerable at the outbreak of the war. In the Madras presidency alone one college and 477 schools with 31,000 pupils were wholly or partly under German management. When it became necessary to intern or repatriate the teachers, the problem arose of maintaining the institutions. The institutions affected fell into two classes—those under enemy management and those under certain of the Roman Catholic Orders which are of a cosmopolitan character and employed Germans and Austrians along with priests of allied or neutral nations. In the case of the latter, it has sometimes been possible for the missions to substitute subjects of allied or neutral nations in the place of enemy aliens. In the case of the former the schools have, so far as possible, been continued under the management of other missions.

The discovery of agencies to manage and teachers to instruct in place of those repatriated has been a matter of some difficulty. The three provinces mainly affected were Madras, Bombay and Bihar and Orissa. In Madras the Missionary Educational Council of Southern India have continued the schools under approved committees and correspondents, on condition of receiving the usual recurring grants from government. In Bombay a distinction was drawn between those institutions which it was desirable to maintain, and those whose disappearance would cause no serious dislocation. Grants were continued to the former on the withdrawal of hostile subjects from their staffs and in some cases the grants were temporarily increased so as to permit of the appointment of substitutes. The latter, comprising smaller institutions, were deprived of grant and either ceased without perceptible ill results or are being carried on unaided. In Bihar and Orissa, where some slight trouble was experienced among the congregations of enemy missions, the work of the German-Swiss Capuchins has been taken over by Belgian Capuchins and most of that of the German Evangelical Lutheran Mission by the Society for the Propagation of the Gospel.

Thus care has been taken to continue the educational activities formerly carried on by enemy agency, through the provision of new agency, and, where necessary, extra funds. Naturally the subventions received from Europe for the support of both allied and enemy missions have been seriously affected. As a case in point may be mentioned the Roman Catholic mission in Bihar and Orissa, which was largely dependent on funds from Belgium; these having ceased, government made a special grant of over ₹25,000.

Assistance rendered by educational institutions.

23. The influence of the war has not been wholly adverse, " It has excited interest," says the Bombay report, " among people of all ranks and of all ages in great world issues, enhanced their historical and geographical knowledge, broadened their outlook, awakened their sympathy for those adversely affected by it and united them in the common endeavour of all parts of the empire to contribute toward its successful prosecution."

Educational institutions have rendered assistance in various ways. The following is taken from the report of Mr. Waddington, principal of the Mayo College for Rajputana chiefs :—

" Four members of the English staff, Messrs. Twiss, Ashcroft, Braithwaite and Millar joined the army, and six of the college guardians returned to military duty. Eleven old boys have served with the forces on different fronts and several of them have been mentioned in despatches. On the outbreak of war in 1914, a sum of ₹3,482 was contributed by the boys and staff to the Imperial Indian Relief Fund, and a college war fund was subsequently opened, from which a monthly subscription of about ₹600 has

been sent to one or other of the relief funds. On the two anniversaries of the declaration of war in 1915 and 1916, gatherings were held in the college hall and sums of ₹1,500 and 2,000 from the war fund were placed at the disposal of His Excellency the Viceroy as tokens of the devotion of the college to the just cause in which India is helping the Empire. Another donation of ₹1,000 was presented on the occasion of His Excellency's visit to the college in November 1916. Other gifts, including four aeroplanes, and liberal donations to relief funds, were made from time to time by individual students. Bonds and certificates in the Indian war loan were purchased by the college staff, boys and servants to the value of ₹53,200, and by the college fund to the value of ₹1,41,000. Thus the total contributions to the war loan from the college up to 31st April 1916 amounted to ₹1,94,200."

Mr. Waddington is himself now on military duty with the rank of Lieutenant-Colonel. From other Chiefs' Colleges, too, a number of ex-students have proceeded to the front.

24. Schools in general have taken a share in providing money and men. The universities have organised corps of the Indian Defence Force. In the Punjab an attempt was made to raise a company of graduates and undergraduates for active service. Only 56 fit recruits were forthcoming and the Lieutenant-Governor expresses disappointment at the result. These recruits have been formed into a Brigade Signal section and are shortly going on active service. As regards secondary schools in that province, however, the resolution on the Director's report says that their record is one of which they will be proud and proves that the younger generation has inherited to the full the loyal and martial traditions of their forefathers.

Red Cross work is reported in various institutions. The Belgian Children's Day was celebrated in Bombay schools in July 1916 and produced ₹1,30,600. A War Loan Day was instituted in the same presidency in June 1917 and large subscriptions were secured. Though the Director in the Central Provinces complains of ignorance and apathy on the part of pupils and though he purposely refrained from calling for returns, he considers that the amount collected must have been considerable and specially mentions the contributions of the Amraoti schools to the Overseas Tobacco Fund for the army, the investment of nearly a lakh in the war loan by Berar schools (some of the aided institutions putting in their funds) and the keenness displayed at some girls' institutions in knitting and sewing. The most noteworthy report comes from the Punjab. Mr. Richey writes of the " splendid response made by the teachers and pupils of the Punjab secondary schools to appeals made to them on behalf of the war. To the Imperial Relief Fund and the Punjab Aeroplane Fund contributions poured in from teachers, from schools and even from separate classes. Teachers have invested largely in the war loan, and though this was obviously impossible for school boys, a suggestion by Mr. Tydeman of the Central Model School that parents might by monthly payments buy postal certificates for their sons resulted in an immediate and unexpected response. The whole of the staff at once announced their intention of co-operating and over 500 students applied for one or more cash certificates. Monthly instalments are still being received from 373 boys and the total result of the subscription from the school so far is ₹6,820; and it is expected that the final amount will not be less than ₹10,000. Apart from pecuniary contributions, the secondary schools have furnished their quota to the fighting forces of the Crown. In the Rawalpindi Division alone the number of teachers and pupils of secondary schools who have enlisted is nearly one thousand."

The Government of India issued a circular with proposals intended to encourage and facilitate the investment by pupils of savings in the Post Office cash certificates.

25. The dissemination of war news in the schools is important both for general reasons and as an educative factor. The Bombay report says that in the early stages the popular mind was greatly affected by disquieting rumours which were encouraged by the adventures of the *Emden*. A campaign of war lectures was started in secondary schools and inspecting officers explained the situation in village schools. The resolution on the Director's report acknowledges the invaluable services rendered by officers of the department in dispelling wrong conceptions of the issues of the war and in teaching adults as well as children to comprehend the principles for which the Allies are

Dissemination of war news.

fighting. Lord Willingdon offered prizes aggregating ₹500 for the best essays on the war written by undergraduates. Lectures illustrated with war slides are given in schools in Bihar and Orissa. In the Central Provinces steps were taken for the circulation of correct war news in all schools and the delivery of addresses on deeds of heroism, particularly by Indian troops, the origin of the war, the aims of the Allies, Ambulance and Red Cross work, etc.

The distribution of pamphlets and newspapers has played a considerable part. Quite a number of works on the war have been translated and issued to schools and the Maharani Nandkumvarba of Bhavnagar has distributed Gujarati leaflets free to schools. The *Al Hakikat* is found in most of the larger schools. Sometimes vernacular newspapers have been issued gratis. A notable development has been the creation of a war news association in the Government College, Lahore. The work of translation and dissemination is done by the students, who also tour at their own expense during the vacation and have assisted in enlisting a considerable number of recruits.

Educative effect of the War.

26. Mr. Covernton says that one cannot fail to notice the influence of war on the activities of schools and the minds of masters and students. "War lectures, exhibitions of war pictures, the spread of war news and war literature, have enlarged their hitherto too limited and cramped mental horizon; the celebration of the Belgian Children's Day, war relief and war loan meetings, and the observance of Durbar Day, Trafalgar Day (as at Belgaum), and the war anniversary have broadened and given a practical direction to their sympathies; thus, conciously or unconsciously, they are being led to a realisation of the unity of the British Empire and of the greatness of our imperial ideals which would have been quite impossible and even inconceivable in times before the war."

Education in Mesopotamia.

27. A small but interesting side effect of the war has been the opening of educational activities on a modest scale in Mesopotamia. The only regular schools maintained by the Turkish education department were a normal school for teachers and a secondary school at Basrah, and three primary schools. The *maktabs* were a negligible quantity so far as education was concerned. A new normal school has now been opened and 29 teachers have already passed the examination and gained appointments in six newly established government schools. The average attendance in these schools totals 400 and is growing rapidly. There are also six schools in receipt of State aid. The difficulty is the lack of qualified teachers; those who have been trained are required in the government schools and for the rest the best material available must be employed. A survey school has been opened, from which 36 boys have passed and been appointed assistant surveyors on probation. Young Arabs are also received in the engineering workshops to learn practical engineering.

CHAPTER III.

GENERAL PROGRESS.

I.—The Resolution of 1913.

28. The Government of India's resolution of April 21st, 1913, touched on every branch of education. Smaller universities and universities of the teaching type were contemplated, as well as development of higher studies and research. The policy of reliance on private effort in secondary education was re-affirmed, a system of school leaving certificates was commended, salaries for teachers were suggested on a reasonable scale and the importance of increasing grants-in-aid was emphasised. The resolution laid down ₹12 as the minimum pay for a trained primary teacher and contemplated a large expansion of elementary schools. It dealt with the training of teachers, technical education, the education of girls, Europeans and Muhammadans. But the main feature of the resolution was its insistence on the importance of those elements of education to which due weight is not always attached—the formation of character, moral and religious instruction, the provision of well supervised hostels, school hygiene and the broadening of the basis by manual training and other forms of practical education *Policy of 1913.*

The resolution laid down no financial policy but indicated as an aim the doubling of the number of primary schools and pupils in the not distant future. The war has interfered with the programme both in this and in other respects. Nevertheless progress has been substantial during a period half of which was marked by financial stringency. Its main characteristics have been the allotment of imperial grants which, with the assistance of provincial revenues, has raised the public expenditure on education by over 50 per cent.; an increase of pupils by nearly 16 per cent.; much needed amelioration of the position of teachers; the creation or consideration of new universities; a quickening of the interest shown in educational problems and especially in girls' education; and some advance in those aspects of education which appeal to faculties other than the mind and the memory.

The present chapter aims at a brief survey of the financial position, the progress made in each of the more important branches, and the development of ideas on education including the success attained in stimulating attention to its broader aspects.

II.—Expenditure.

29. A main characteristic of the quinquennium has been the allotment of imperial grants to provincial governments for the purposes of education. It was not a new policy. In 1902-03 the Government of India had assigned 40 lakhs for general education and in 1904-05 five lakhs to enable universities to fulfil the obligations imposed by the Act of 1904 and private colleges to attain the standard indicated. In the same year a grant of 35·4 lakhs was distributed for primary education and in 1906-07 a further grant of five lakhs was made for technical and European education. All these were recurring grants. *The Imperial grants.*

From 1907-08 till 1910-11 no imperial grants of importance were made. ₹10,000 a year was allotted to the government of the Punjab for the maintenance of the European training class at Sanawar and ₹10,000 to the Calcutta University for the establishment of the Minto professorship of economics.

With the creation of the Department of Education, the policy of imperial grants recommenced. At the close of 1910-11 a non-recurring grant of 93 lakhs was distributed. At the Imperial Durbar in December of the following year a grant of 50 lakhs a year for popular education was announced and this

together with a further grant of 10 lakhs a year for university and secondary education was made available from 1912-13. In the same year a non-recurring grant of 387·18 lakhs was made. In 1913-14 a further recurring grant of 55 lakhs was distributed in specified amounts for different forms of education together with a small non-recurring grant of 0·95 lakhs. In 1914-15 a recurring grant of 9 lakhs was made for any educational purposes selected by the various local Governments and a non-recurring grant of 12·25 lakhs, which included 10 lakhs for the erection of hostels by the University of Calcutta.

This liberal policy, which was made possible by favourable financial conditions, was checked by the war. The recurring grants were of course continued but local Governments were precluded from drawing freely upon the unspent balances of these imperial grants (which in the case of non-recurring grants were large) and no new grants were made available during the years 1915-16 and 1916-17.

The new conditions produced by the prolongation of the war and the general desire manifested in India in common with other countries for the continuance of educational expansion notwithstanding financial difficulties have led at the close of the quinquennium to a resumption of the policy of imperial grants. At the end of 1916-17 a recurring grant of 30 lakhs was announced for the training of teachers and the improvement of their pay. This was made available in 1917-18 and a further grant has been announced for 1918-19 of 30 lakhs recurring for primary education and 30 lakhs recurring for agricultural, technical and commercial education.

The imperial grants given during the quinquennium (including that announced at the close of 1910-11) are as follows :—

Grants of		LAKHS OF RUPEES.	
		Recurring	Non-recurring
1910-11		..	93·00
1912-13		60·00	387 18
1913-14	old	60·00	..
	new	55·00	·95
1914-15	old	115·00	..
	new	9·00	12·25
1915-16	old	124·00	..
	new	..	..
1916 17	old	124·00	..
	new	..	..
	TOTAL	547·00	493·38

Thus the total allotment during the quinquennium has been 1,040·38 lakhs (=£6,935,866) and the annual recurring allotments amounted at the end of 1916-17 to 124 lakhs.

Of the total of 1,040·38 lakhs allotted during the quinquennium 1,039·12 lakhs have been placed in provincial balances or otherwise made available for expenditure. The expenditure out of these grants has amounted to 806·19 lakhs, and a sum of 232·93 lakhs remains unspent. There is a small sum of 1·26 lakhs which is held in reserve by the Department of Education.

30. The position is shown in the statement below.

Statement of Imperial Grants.

[In lakhs of Rupees.]

Province.	Grants to end of 1916-17.		Expenditure								Unspent balance	
			To end of 1915-16.		In 1916-17 recorded under				Total to end of 1916-17.		On the 31st March 1917.	
					Education.		*Other heads.†*					
	Recurring.	Non-Recurring.	Recurring.	Non-Recurring.	Recurring.	Non-Recurring.	Recurring.	Non-Recurring.	Recurring.	Non-Recurring.	Recurring.	Non-Recurring.
Madras . .	82·34	64·65	63·63	47·81	17·98	1·50	·36	1·92	81·07	51·23	·37	13·42
Bombay . .	65·71	57·79	32·92	35·26	11·62	3·08	·02	·40	44·56	38·74	21·15	19·05
Bengal . .	119·99	146·24	67·11	79·69	19·20	·43	·56	·91	86·87	81·03	33·12	65·21
United Provinces	70·86	66·57	54·89	42·14	12·63	2·10	3·34	..	70·86	44·24	..	22·33
Punjab . .	41·06	39·39	31·51	39·39	9·55	..	..	..	41·06	39·39	..	..
Burma . .	29·87	33·75	18·95	17·35	5·89	..	·18	..	25·02	17·35	4·85	16·40
Bihar and Orissa	50·66	41·37	32·90	21·03	8·32	·08	·17	2·34	41·39	23·45	9·27	17·92
Central Provinces	27·01	23·40	19·86	17·70	7·15	1·47	..	·38	27·01	19·55	..	3·85
Assam . .	17·43	15·70	9·70	15·06	3·65	·14	·23	·50	13·58	15·70	3·85	..
N.-W. F. Province.	9·54	6·07	7·07	6·07	2·17	..	..	..	9·24	6·07	·30	..
Coorg . .	·62	1·13	·44	1·08	·16	..	..	..	·60	1·08	·02	·05
Delhi . .	5·09	2·79	3·81	2·78	·28	·01	1·00	..	5·09	2·79	..	..
Other provinces, etc.	6·62	13·47	3·68	12·33*	1·49	·39	·17	·26	5·34	12·98	1·28	·49
Total .	526·80	512·32	346·47	337·69	100·09	9·20	6·03	6·71	452·59	353·60	74·21	158·72

Of the unspent balances 74·21 lakhs are debitable to the recurring assignments but are available only for capital expenditure; the remainder of the balances, amounting to 158·72 lakhs, is debitable to the non-recurring grants. Again, 230·79 lakhs are included in the balances of the major provinces and 2·14 lakhs were not spent by minor administrations, etc. The largest unspent amounts are in the balances of Bengal.

31. It is sometimes asserted that the imperial assignments for education have largely been wasted. The system under which large sums of money are made available at irregular intervals and not as part of an orderly financial programme may conduce on the one hand to discontinuity of policy or on the other to spasmodic and hence reckless expenditure. Schemes which accommodate themselves to the amount of the allocations may not be ready. The ultimate cost of a project may far exceed the sum available and uncertainty regarding the future may deter a local Government from embarking upon a scheme the first instalments of which will involve subsequent enhanced expenditure which they have no certainty of being in a position to meet. When a department or a local Government is suddenly provided with unanticipated funds, there is likely to be haste in expenditure. For the funds at disposal of the department lapse at the conclusion of the year and there may be difficulty in re-including them in the budget; while inflated balances in the hands of a

* Includes a refund of ·10 lakhs.
† Educational expenditure through Public Works, Medical and other Departments.

local Government are a subject of public criticism. The danger of waste is particularly present in the case of non-recurring grants. But, despite the absence of any regular financial programme for educational expenditure, the reports bear ample testimony to the facts that the imperial grants have not been wasted, that they have been of inestimable service in remedying old and recognised defects and that the trouble has been, not any excess of funds, but their inadequacy to meet even the most obvious requirements of the situation. Apart from the many uses to which, as shown in this and the following chapters, local Governments have devoted these grants, large sums have been distributed to local bodies which have thus been enabled to raise the pay of their teachers, increase the number of schools and carry through other reforms.

Other critics state that the grants have been expended, not on increasing the number of schools, but in the quest of a fanciful and unnecessary standard of efficiency. The problem has, in a vast number of schools, hardly arrived at one of efficiency at all. It is still the removal of the grosser forms of inefficiency. But crying as are the claims of improvement and consolidation, the diagram No. 5 at the beginning of the review clearly shows the effect on numbers which the imperial grants have produced, as well as the fact that their effect is naturally continued into subsequent and leaner years. Roughly speaking, the expenditure (whether direct or indirect) of every additional pound sterling has been accompanied by the addition of one pupil to the enrolment. The grants have been used for expansion as well as for improvement; nor is it to be forgotten that improvement is a potent cause of expansion.

Generally it may be asserted that the imperial grants and the funds with which local Governments have supplemented them from provincial revenues have been of the greatest assistance. Their defect is that they are irregular. The realisation of a continuous programme of education requires a steady programme of finance. At present, says one of the reports, programmes of development have to wait upon expediencies.

Expenditure from all sources.

32. But the imperial grants by no means account for the total increase in expenditure which has taken place during the quinquennium. The expenditure in 1911-12 was ₹7,85,92,605 (£5,239,507), in 1916-17 ₹11,28,83,068 (£7,525,538). There has thus been an increase of ₹3,42,90,463 (£2,286,031).

The sources from which this expenditure is met and the increases which have taken place are as follows.*

——	1911-12.	1916-17.	Increase	Percentage of increase.
	₹	₹	₹	
Provincial revenues	2,69,58,808	3,91,62,853	1,22,04,045	45·27
Local funds	1,05,80,114	1,73,78,535	67,98,421	64·25
Municipal funds	29,84,150	49,39,083	19,54,933	65·51
Total public funds .	4,05,23,072	6,14,80,471	2,09,57,399	51·71
Fees	2,19,08,646	3,18,71,138	99,62,492	45·47
Other private sources	1,61,60,887	1,95,31,459	33,70,572	20·85
Total private funds .	3,80,69,533	5,14,02,597	1,33,33,064	35·02
Grand Total .	7,85,92,605	11,28,83,068	3,42,90,463	43·63

In 1914-15 a sum of about 30 lakhs disappeared from the returns owing to the exclusion of certain Native States, figures for which had previously been shown along with those for British India. But for this, the increase of 43·63 per cent. would have been greater.

* The statistics of expenditure given here and in the following paragraphs are not comparable with those given in the Financial Statements of the Government of India and of Provincial Governments in the published accounts and estimates of government, as they have been compiled on different lines.

33. The following table compares the expenditure from different sources and the rates of increase of the total expenditure in the several provinces.

—	Public expenditure.		Private expenditure.		Total expenditure.	
	Amount.	Percentage to total expenditure.	Amount.	Percentage to total expenditure	Amount.	Percentage of increase in quinquennium.
	Rs.		Rs.		Rs.	
Madras	1,12,75,472	51·9	1,04,12,424	48·0	2,16,87,896	59·9
Bombay	97,87,187	62·8	58,01,572	37·2	1,55,88,759	14·5
Bengal	90,98,934	37·4	1,52,12,852	62·6	2,43,11,786	34·7
United Provinces	92,03,450	62·4	55,42,472	37·6	1,47,45,922	36 6
Punjab	62,92,360	57·9	45,70,960	42·1	1,08,63,320	58·2
Burma	38,35,117	57·4	28,44,028	42·6	66,79,145	41·0
Bihar and Orissa	47,04,104	57·7	34,47,976	42·3	81,52,080	45·7
Central Provinces and Berar	38,08,280	77·8	10,88,036	22·2	48,96,316	49·9
Assam	17,63,738	68·9	7,95,552	31·1	25,59,290	59·0
North-West Frontier Province	7,69,925	74·7	2,60,703	25 3	10,30,628	140·9
Other Administrations	9,41,904	39·8	14,26,022	60·2	23,67,926	..
India	6,14,80,471	54·5	5,14,02,597	45·5	11,28,83,068	43·6

The excess of expenditure from public over that from private funds has risen from 25 lakhs in 1911-12 to a crore in 1916-17. The increase would have been larger but for the exclusion of Native States in 1914-15; *e.g.*, apart from Native States, the percentage of increase in Bombay would have been 32·5.

34. The following table compares the amounts of expenditure on education from provincial revenues, the proportions they bear to total expenditure and the percentage of increase during the quinquennium. *Expenditure from provincial revenues.*

Province	Expenditure on education from provincial revenues in 1916-17.	Percentage of expenditure from provincial revenues to total expenditure.	Percentage of increase in expenditure from provincial revenues, since 1911-12.
	Rs.		
Madras	76,93,073	35·5	73·9
Bombay	75,50,817	48·4	39·9
Bengal	66,65,647	27·4	21·9
United Provinces	47,96,188	32·5	27·9
Punjab	31,09,136	28·6	36·4
Burma	27,68,394	41·4	45·8
Bihar and Orissa	29,57,757	36·2	51·3
Central Provinces and Berar	15,96,198	32·6	50·0
Assam	9,97,022	38·9	69·8
North-West Frontier Province	2,88,878	28·0	191·9
Other provinces	7,39,743	31·2	..
Total	3,91,62,853	34·6	45·3

At first sight it may appear that the increase in the annual provincial expenditure is less by about two lakhs than the recurring imperial grant allotted during the period and included in provincial revenues. But, in the first place, only 106·12 of the imperial recurring grant of 124 lakhs was spent in 1916-17, and, in the second, the sum of 391½ lakhs shown in these tables does not indicate the full expenditure from provincial revenues, out of which in that year about 115 lakhs were handed over for expenditure by local bodies and figure as local or municipal funds. Hence, though not all provinces have fully spent their recurring assignments, provincial revenues have on the whole made a substantial contribution to the increase. Provincial expenditure (including expenditure from imperial grants and contributions to local bodies) is in reality about 507 lakhs.

Though the increase in expenditure during the past few years has, owing to the war, disappointed expectation, the financial statements show that certain reductions in 1915-16 and 1916-17 below the figure for 1914-15 have given place to an increase in the budget for 1917-18, and that the budget estimate of expenditure from the public revenues in 1918-19 is ₹6,31,65,000 (£4,221,000) against an expenditure of ₹3,03,17,835 (£2,021,189) in 1911-12.

Expenditure from local and municipal funds.

35. The resources of local bodies are proverbially inexpansive. Their expenditure upon education has indeed risen from ₹1,35,64,264 in 1911-12 to ₹2,23,17,618 in 1916-17. But more than 115 lakhs out of the expenditure now shown as incurred by local bodies represents contributions from provincial revenues (including some portion of the imperial grants); and much of this sum has been handed over to local bodies during the quinquennium. Further details will be found in paragraphs 113 to 117.

A writer who has carefully studied the economic conditions of a Bengal district declares that the local taxation amounts in its yield to the local authorities to about ½ per cent. on the total income of the population of that district. "The truth is," he writes, "that in Bengal not only is all taxation exceptionally light, but local taxation in particular is an insignificant burden upon the resources of the people, that the provision of local conveniences and material benefits is in consequence very inadequate, but that it cannot be improved unless larger sums are placed at the disposal of the local authorities."*

Fees.

36. The amount contributed by fees constitutes 28·2 per cent. of the total expenditure. The magnitude of this proportion arises rather from the paucity of funds derived from other sources than from the rates of fee charged. The annual fee payable by a student averages ₹69·4 a head in a college, ₹14·4 in a secondary school and 13·7 annas in a primary school. In English public schools the tuition fee has been stated to average a sum equivalent to ₹300, and in aided secondary schools about ₹118; in France the secondary school fee ranges from ₹213 to ₹433, in Germany from ₹82 to ₹112.†

Inadequacy of funds.

37. These, together with endowments and subscriptions, form the sources from which education is financed. India spends 4·3 per cent. of her public revenues upon education—a figure which compares not unfavourably with the percentage so spent in other countries.‡ But the total expenditure from all sources upon education represents only Re. 0·46 per head of the population, and expenditure from public sources Re. 0·25. The incidence of Parliamentary grants alone (to say nothing of local rates) varies from seven to ten shillings in different parts of the United Kingdom. Still greater is the contrast when the incidence of total expenditure on primary education is considered.§ Even when allowance is made for difference in the purchasing power of money, it is clear that the sums now at disposal are insufficient. The demand for

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* *The Economic Life of a Bengal district*, by J. C. Jack, page 129.

† P. MONROE.—*Principles of Secondary Education*, pages 129, 135, 93, 112.

‡ The following percentages will serve for comparison—Denmark 7·9 per cent., France 6·5, Italy 4·7, Russia 3·8, Austria 3·3, Egypt 2·9. In Denmark and Austria public worship is included with public instruction. *Statistical Abstract for the Principal and other Foreign Countries*, 1907—12.

§ The Commissioner of Education, Washington, gives some interesting figures. Converted into approximate rupee equivalents, his incidence of expenditure on elementary education per head of population comes to ₹12·81 in Scotland, ₹10·08 in England and Wales, ₹7·68 in Germany, ₹3·27 in France, ₹1·35 in British Honduras, ₹1·17 in Jamaica, ₹0·276 in Ceylon and ₹0·105 in British India. The figures are not fully up to date; those for India are for 1914-15. *Report of the Commissioner of Education, Washington, for the year ended June 30. 1916. pages 668 and following.*

higher instruction is growing rapidly; but even the available facilities have to be provided at a rate which can only result in much inefficiency. There remain the still more gigantic problems of mass education, industrial training and the almost untrodden field of the education of girls. A question which faces the practical educationist is that of the source from which these pressing needs are to be met.

III.—Institutions and pupils.

38. Institutions (public and private) have increased during the quinquennium by 16,530 to a total of 192,755 and their pupils by 1,071,225 to 7,851,946. Public institutions have increased by 18,620 to 154,952 and their pupils by 1,078,583 to 7,207,308. *Increase of institutions and pupils.*

39. The figures for provinces, together with the percentages of those under instruction to the population, are as follows. *Increase in different provinces.*

Province.	Institutions in 1916-17.	Percentage of increase or decrease.	Pupils in 1916-17.	Percentage of increase or decrease.	Percentage of those under instruction to total population.
Madras	36,045	+16·1	1,661,012	+29·7	4·01
Bombay	13,264	—19·4	780,504	—15·4	3·9
Bengal	48,373	+12·4	1,918,432	+13·0	4·2
United Provinces	17,728	+ 7·0	894,886	+25·7	1·9
Punjab	9,357	+26·3	476,738	+25·1	2·4
Burma	27,079	+16·7	592,523	+33·1	4·9
Bihar and Orissa	29,632	+ 0·57	845,025	+ 5·01	2·4
Central Provinces and Berar	4,561	+14·8	351,165	+12·1	2·5
Assam	4,890	+18·4	233,913	+28·4	3·5
North-West Frontier Province	994	+10·3	46,285	+32·6	2·1
Other Administrations	832		51,463		3·2
India	192,755	+9·4	7,851,946	+15·8	3·2

The figures are affected by the exclusion in 1914-15 and following years of the returns of certain Native States which had previously been included. The change removed an anomaly but vitiates comparisons. It reduced the figures in that year by approximately 5,000 institutions, a third of a million pupils and 30 lakhs of expenditure. On the other hand, the figures for Ajmer-Merwara, Baluchistan and Bangalore were included for the first time in 1916-17, increasing the totals by 497 institutions, nearly 30,000 pupils and just over 10 lakhs. The net result is that the increases have been lowered by some 4,500 institutions, 300,000 pupils and 20 lakhs. The effect of the former change is particularly noticeable in Bombay, where over 200,000 pupils were struck out of the returns in 1914-15. If the pupils of Native States are excluded from the figures of that presidency in 1911-12, the enrolment will be found to have risen from 713,145 to 780,504, and the apparent decrease by 15·4 per cent. is converted into an increase by 9·4 per cent. The Bihar and Orissa figures were similarly affected by the loss of over 54,000 pupils.* An adjustment made for all India on the basis of the net results noted above would give an increase of nearly 1,400,000 pupils and would substantially enhance the percentage of increase.

40. The figures given above deal with all institutions. The amount of increase is diminished by the fact that there has been a falling-off in the num-

*The figures given for 1911-12 in the body of the Bihar and Orissa report are for the area under review in 1916-17.

ber of private institutions and of their pupils. The figures for public institutions are as follows.

—	Public institutions in 1916-17.	Percentage of increase or decrease.	Pupils in 1916-17.	Percentage of increase or decrease.	Percentage of those in public institutions to total population.
Madras	31,340	+21·1	1,537,039	+33·3	3·7
Bombay	11,388	—15·7	739,385	—11·2	3·8
Bengal	46,104	+13·5	1,855,512	+12·9	4·1
United Provinces.	12,912	+17·1	805,420	+29·6	1·7
Punjab	6,442	+48·8	421,043	+33.2	2·1
Burma	9,564	+43·3	393,399	+45·5	3·2
Bihar and Orissa	26,867	+ 3·5	797,471	+ 4·8	2·3
Central Provinces and Berar. . . .	4,503	+13·5	349,061	+11·2	2·5
Assam	4,587	+15·0	224,819	+27·0	3·3
North-West Frontier Province . . .	685	+113·4	41,233	+61·8	1·9
Other Provinces	560	..	42,926	..	2·6
TOTAL .	154,952	+13·7	7,207,308	+17·6	2·9

It is by the number of public institutions and their pupils that the progress of education must (at least in most of the provinces) be judged and the result of an enhanced expenditure must be measured.

Increase in different kinds of education.

41. As regards the growth of different kinds of institutions, it is significant that while the percentage of increase among pupils in primary schools is 16·5, that in secondary schools is 28 and that in arts colleges is 58·9. Pupils enrolled in high school classes have increased by 52·5 per cent.

Other signs of progress.

42. In addition to the figures of those under instruction the progress of intellectual activity can be roughly judged by the increase in the number of publications, etc. Since the latest figures are not available, these are given for the five years 1910-11 to 1915-16. The number of printing presses increased from 2,751 to 3,237, of newspapers from 658 to 857 and of periodicals from 1,902 to 2,927. There has been no great change in the number of books published. Books in English or other European languages stand at 1,541—a decrease of 37; books in Indian vernaculars or classical languages at 10,658—an increase of 595. The growing popularity of periodicals is noteworthy. Madras possesses 1,195 educational associations and 764 reading rooms and literary societies with a membership of over 133,000. Bombay has 227 public libraries. In the Central Provinces boards are encouraging village libraries.

Review of progress.

43. The graphs which figure at the beginning of this volume give an idea of the growth of education from about 1860 onwards. The following tables show the same by means of figures.

Institutions and pupils.

Year.	Institutions.		Pupils.	
	Number.	Increase or decrease over previous figure.	Number.	Increase or decrease over previous figure.
1855.	50,998	..	923,780	..
1870-71	83,052	+32,054	1,894,823	+ 971,043
1881-82	114,109	+31,057	2,451,989	+ 557,166
1886-87	127,116	+13,007	3,343,544	+ 891,555
1891-92	141,793	+14,677	3,856,821	+ 513,277
1896-97	152,025	+10,232	4,356,870	+ 500,049
1901-02	147,703	— 4,322	4,521,900	+ 165,030
1906-07	162,528	+14,825	5,388,632	+ 866,732
1911-12	176,225	+13,697	6,780,721	+1,392,089
1916-17	192,755	+16,530	7,851,946	+1,071,225

Expenditure.

(figures in lakhs of rupees.)

Year.	Total expenditure.		Public expenditure.	
	Amount.	Increase over previous amount.	Amount.	Increase over previous amount.
1881-82	186·07		not	known
1886-87	252·42	+ 66·35	134·82	..
1891-92	305·20	+ 52·78	156·18	+ 21·36
1896-97	352·45	+ 47·25	167·66	+ 11·48
1901-02	401·21	+ 48·76	177·04	+ 9·38
1906-07	559·04	+157·83	296·35	+ 119·31
1911-12	785·93	+226·89	405·23	+108·88
1916-17	1128·83	+342·90	614·80	+209·57

Figures previous to 1885-86 are not reliable. In that year the first quinquennial review was written. The figures for 1855 and 1870-71 are taken from the report of the Education Commission of 1882. They omit Burma and the figures for the Punjab are admittedly imperfect. Territorial expansion, the registration of existing schools hitherto not brought into the returns and changes in classification, etc., largely account for the considerable increases during those early periods. In no fully recorded quinquennium has the number of schools increased so largely as in that now under review. In respect of increase in pupils the period is second only to the preceding quinquennium, and, if the changes just mentioned in the collection of figures be taken into account, it stands on a par with that period. In the matter of total and of public expenditure it constitutes an easy record. Other items in which it shows the highest increase yet attained are college students (where the increase more than doubles the highest previous quinquennial figure), secondary institutions and their pupils, primary schools and European pupils (in which last the increase is far more than double any previous increase).

In respect of primary pupils and the education of girls and Muhammadans the increase was greater than in any preceding quinquennium save the last.*

There are other matters (*e.g.*, progress in commercial education) in which this quinquennium has shown particular evidences of development.

44. These graphs and figures clearly show the financial effect of the imperial grants inaugurated by Lord Curzon and again during the past five years. In the fifteen years ending 1901-02, public expenditure on education had increased by only 42·22 lakhs. In the past fifteen years it increased by 437·76 lakhs. (The decline indicated in the graphs during 1915-17 is due to the prohibition on expenditure from balances and concerns only capital expenditure.) The period from 1897 to 1902 is the most stagnant in the annals of Indian education; the increase of pupils was small, the number of institutions declined. The time was one of calamity—two severe famines and a widespread epidemic of plague.† Half way through the quinquennium now under review, the returns were shorn of a fraction of their figures and the empire was plunged into a devastating war. Nevertheless the period marks a record in the growth of expenditure and of new institutions and in other important respects.

The numerical result.

45. But any sense of complacency resulting from these figures will be chastened by the fact that only 3·22‡ per cent. of the population is under instruction—though it is to be realised that the number of male pupils has risen from 4·47 per cent. of the male population to 5·31 per cent. These calculations are made on the census figures of 1911, and hence are probably a slight over-statement.

* As figures for these items may prove interesting, they are given below.

College students, secondary schools and pupils and primary schools.

Year.	College students.		Secondary Schools.		Pupils in secondary schools.		Primary Schools.	
	Number.	Increase or decrease	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.	Number	Increase or decrease over previous figures.
1881-82	..	..	..	..	..	..	..	..
1886-87	11,501	..	4,517	..	429,093	..	89,187	..
1891-92	16,277	+ 4,776	4,872	+ 355	473,294	+ 44,201	97,109	+ 7,922
1896-97	18,783	+ 2,506	5,267	+ 395	535,155	+ 61,861	103,920	+ 6,811
1901-02	23,009	+ 4,226	5,493	+ 226	622,768	+ 87,613	97,854	— 6,066
1906-07	25,168	+ 2,159	5,898	+ 405	713,342	+ 90,574	112,930	+15,076
1911-12	36,284	+11,116	6,370	+ 472	924,370	+211,028	123,578	+10,648
1916-17	58,639	+22,355	7,693	+1,323	1,186,335	+261,965	142,203	+18,625

Girls, Europeans and Muhammadans.

	Girls under instruction.		Europeans under instruction.		Muhammadans under instruction.	
	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.
1881-82	..	..	..	..	..	..
1886-87	227,736	..	23,505	..	754,036	..
1891-92	339,043	+111,307	25,795	+2,290	887,236	+133,200
1896-97	402,158	+ 63,115	29,176	+3,381	966,632	+ 79,396
1901-02	444,470	+ 42,312	31,122	+1,946	978,221	+ 11,589
1906-07	645,028	+200,558	31,130	+ 8	1,172,371	+194,150
1911-12	952,923	+307,895	34,372	+3,242	1,551,151	+378,780
1916-17	1,230,419	+277,496	42,545	+8,173	1,824,364	+273,213

† Mr. Nathan also attributed the arrest of progress in primary education to the fact that previously the departments had been dealing with comparatively accessible and well-to-do classes, but had now to carry education, of improved type, to scattered hamlets, to poorer communities, to the low castes and to the wild jungle tribes. *Progress of Education in India*, 1897-98—1901-02, *being the Fourth Quinquennial Review*, page 451.

‡ The following figures will serve for comparison, though they refer only to pupils undergoing elementary education; Scotland 17·38 per cent. of the population, England and Wales 16·52, Germany 16·30, France 13·90, British Honduras 13·35, Jamaica 11·42, Ceylon 8·94.

46. The increase of those under university instruction has been by 61·6 per cent. The improvement of university and college buildings, especially for science, has proceeded apace. Matters for serious concern are the paucity of professors as compared with the rapid increase of students and the remarkable variation in the cost and general efficiency of institutions which in the eyes of the universities are of equal value. *University education.*

The universities have received money from the Government of India and have been enabled to provide themselves with accommodation, where this was necessary, to create chairs for higher teaching and to promote research and instruction by university professors. The University of Calcutta in particular has received considerable State aid as well as private benefactions and carries on higher teaching on a large scale. Shortly after the conclusion of the period the new Patna University was incorporated, its object being to combine affiliating and examining functions with the maintenance of a strong central group of residential institutions. The Benares Hindu University was incorporated during the quinquennium as a local and residential university—the first of this kind in India. A university with two centres has been launched in the State of Mysore. Schemes have proceeded for universities at Dacca, Nagpur and Rangoon. The Government of India have had under consideration the constitution of the senates; and the appointment of a Commission to investigate the University of Calcutta evidences the interest taken in university reform.

47. The problem of university education is indissolubly bound up with the secondary institutions. Controversy arises from the interaction between two schools of thought. From the one point of view, a rapid expansion of schools, colleges and pupils is essential for the well-being of the country, the universities must be under popular control and the powers both of the professorial body and of government should be reduced to a minimum. This attitude received illustration in the difficulties which attended the passage of the Patna University Bill. From the other point of view, reasonable efficiency must precede recognition, the voice of the expert should predominate in the university and, so long as there is insistence upon control by bodies containing a considerable lay element, so long must government protect the interests of higher education by the retention of certain powers. Government is frequently accused of trying to check the expansion of higher education and, to that end, of making a fetish of efficiency. It has already been shown that government has liberally subsidised colleges and secondary schools during the quinquennium, that the increase of pupils in these institutions has proved a record and that, whatever her position in other branches of education, India is not numerically behindhand in these respects. The attainment of college students varies from province to province and is affected by the capability of those who are admitted to university courses. Mr. Hornell says that the normal student who has passed the Calcutta matriculation even in the first division is not capable of anything approaching real university study. The principal of a Bombay college remarks that owing to the unsatisfactory nature of teaching in many secondary schools, the junior college classes are rapidly becoming little better than indifferent school classes. Mr. Südmersen says that the equipment of first-year students as regards the broad facts of life, of history and of geography, is defective and that a world of ideas has to be created before any profitable advance in literature can be made. A suggested solution of the problem is the transfer of these classes to high schools. But the Bombay Director points out that such action would presuppose great improvement in the schools and is unlikely to commend itself to public opinion.

48. The great increase in secondary education, amounting to over 28 per cent. of the pupils, and over 52 per cent. in the high school classes, has been accompanied by an increase of over 53 per cent. in the expenditure. Progress has been made with the schemes of improvement initiated subsequently to 1906, save in the eastern provinces, where administrative redistribution and the deterrent cost of dealing with a great number of institutions have delayed the realisation of the main proposals. Though pay has been substantially raised in most of the provinces, systems of grant-in-aid liberalised, buildings improved, and considerable reforms introduced in science teaching, the condition of secondary education as a whole still remains unsatisfactory. *Secondary Education.*

Particularly depressing are the reports from Bengal, where only 1·3 per cent. of the English and classical teachers are certificated, the pay of all secondary teachers averages only ₹29 a-month, and the cost of a pupil in an Anglo-vernacular school for Indians averages barely ₹20·5 a-year.

There is a general impression that the growth of demand for this form of education, sometimes without adequate means of coping with it, has been accompanied by a lowering in the standard of some matriculations. The University of Calcutta constituted a committee in 1915 for investigation of the rapid increase of passes at this and other examinations. The result of its deliberations is not yet known. The number of pupils who present themselves for school leaving certificates continues to increase. Steps have been taken to remedy certain defects of the system in Madras, and schemes for such certificates were being considered in Bombay, the Punjab and Bihar and Orissa.

Primary Education.

49. There are now 142,203 primary schools in India with 5,818,730 pupils. These figures represent increases of 15 and 16·5 per cent. respectively. The expenditure has increased from a little over two crores to nearly three crores. The number of pupils undergoing elementary instruction can be more accurately calculated by considering not merely primary schools but the primary departments of secondary schools and such private institutions as impart secular education. On this computation the number of children undergoing elementary instruction is now 6,748,101, which is equivalent to 2·8 per cent. of the population, being 4·5 per cent. of the male and 0·95 per cent. of the female population. Discouraging as these figures are, they are still more so when it is remembered that 90 per cent. of the children are congregated in the lower primary classes. Two possible lines of advance have been indicated during the quinquennium and just after its close. The former is the acceleration of progress under a voluntary system by means of enhanced grants and careful surveys. Among survey projects may be mentioned the application to Bengal in general of the union school system already initiated in Eastern Bengal districts, the proposals made in the United Provinces for the organisation of circle schools with feeder institutions and the scheme formulated in Bihar and Orissa which proceeds on a mathematical increase of the pupils in various schools according to their existing enrolment. The latter is the introduction of some compulsory measure. Such a measure was introduced for municipalities in Bombay just after the close of the quinquennium and is contemplated in Bengal, the Punjab and Bihar and Orissa. The difficulty inherent in the former plan is the doubt whether parents who partially depend upon the labour of their children will choose to send them to school for any reasonable length of time. The success of the second plan depends upon the willingness of local bodies to avail themselves of the permission of adopting compulsory measures and to tax themselves with a view to realising them. It is encouraging that a measure has been passed to permit the enhancement of cesses for educational purposes in Berar. In the case of both schemes the provision of funds from provincial revenues will undoubtedly be necessary. The whole subject has received much attention during the quinquennium. In the United Provinces a representative committee under the presidency of Mr. Justice Piggott discussed the problem and evolved the scheme of circle schools, to which allusion has just been made, with a view to encouraging boys to continue their studies to a higher stage than is now the case. It is a matter for congratulation that the proportion of cost borne by fees has declined during the quinquennium and there is no reason why any boy should be deterred from obtaining elementary instruction on the score of poverty. But the question is not merely one of expansion of facilities or of revision of fees. The duration of school life, though it has increased during the quinquennium, is still too short to prevent a speedy relapse into illiteracy among a large fraction of the pupils educated. The problem is largely an economic one, although the provision of more capable teachers will probably prove effective in its partial solution.

Oriental studies.

50. It has not been found possible to carry out the proposal of the Conference of Orientalists for the foundation of an oriental research institute, but some interest is manifested in the development of the study of Sanskrit, Arabic, Pali, etc. The number of pupils shows no diminution. Expenditure

has increased and in the Bombay Presidency the foundation of a Bhandarkar Research Institute at Poona and the proposal for a Cama Oriental Institute show that the public are desirous that India should take a proper place in the prosecution of classical research. On the other hand the introduction of a modernised curriculum into the majority of the large *madrassas* of Bengal points to a feeling among the Muhammadans of that part of India that their future lies along the prosecution of utilitarian studies.

Professional education.

51. The feature of medical education has been the growing demand on the part of the public for a larger supply of practitioners. It has been necessary on the one hand to meet it and on the other hand to guard against the abuses to which such a demand may give rise. Protection has been afforded by registration Acts and a medical degrees Act. Expansion has been provided by the creation of new medical authorities empowered to grant licenses and diplomas to those whose qualifications are not of university standard, and by the affiliation of a privately managed college in Calcutta. An important development was the opening of the Lady Hardinge Medical College for women at Delhi.

Considerable attention has been paid to the reorganisation of agricultural education, with a view to raising the standard of the colleges which train experimenters and instructors and to affording facilities to landowners and agriculturists. A description of the changes which have taken place in the colleges is given at length in chapter XI.

Institutions for imparting commercial education have shown remarkable development. The principal event was the opening of the Sydenham College of Commerce in Bombay. The study of economics and of commerce in its higher branches has been recognised in the universities by the creation of a chair at Allahabad and courses of commerce at Bombay and Allahabad. Business schools have multiplied—a fact which shows that the demand for skilled clerks is rising. The number of students has more than doubled and expenditure has nearly trebled.

Technical Education.

52. The number of students undergoing technical and industrial education has not largely increased. The period has been one of revision and consolidation rather than of expansion. In the field of civil engineering the Public Works Department Reorganisation Committee has pronounced the colleges to be well staffed and equipped but has recommended some reorganisation and greater attention to practical training. The Morison Committee in England and the Atkinson-Dawson Committee in India investigated the question of technological scholarships tenable abroad and the possibility of establishing a closer contact between educational institutions in India and industrial firms. Here again, the recommendations have been for greater emphasis upon the practical side of instruction. New rules calculated to permit of this improvement have been framed for technological scholars in the United Kingdom. The system of apprenticeship receives enhanced prominence in the systems of training pursued in India. Individual schemes and institutions have made some progress despite the financial stringency and the difficulties which surround industrial education. The Indian Institute of Science at Bangalore is doing good work. There has been marked improvement in some of the more important technical institutions, and the schools of art, which are mainly industrial, are progressing upon sound lines. The schemes for the removal of the Civil Engineering College at Sibpur near Calcutta and for the establishment of a technological institute in that city are at present in abeyance. Effect has been given in large measure to the various proposals in the United Provinces for the establishment of a technological institute at Cawnpore and the removal of the industrial departments from the Thomason College at Roorkee (which will henceforth be an institute purely of civil engineering) to Lucknow, Bareilly, and Benares. The Cawnpore Institute has commenced work but is at present hampered by difficulties of staffing. The first decade of the century had seen the growth of many schemes the realisation of which was bound to occupy a considerable period and is still taking place along with their partial revision in the light of subsequent experience. During the quinquennium the Indian Industrial Commission was constituted and its deliberations may be expected to throw considerable light upon this thorny subject.

The training of teachers.

53. The training of teachers has received special attention. The number of training institutions has risen from 587 to 816, that of students from 13,425 to 19,396 and expenditure from 21½ lakhs to nearly 34 lakhs. For higher training new colleges have been opened at Lucknow, at Jubbulpore (just before the commencement of the period) and at Peshawar. The college at Patna has been much improved and the establishment of further colleges is proposed at Rajahmundry in Madras and at Agra. In the matter of vernacular training the principal features have been the expansion of the system of small training classes attached to middle vernacular schools in the United Provinces and the framing of a scheme whereby the *guru*-training schools of western Bengal will be enlarged and improved on the analogy of the system previously sanctioned for eastern Bengal. The teaching staff has been made more efficient and pupil teachers of better qualifications are attracted to the institutions. Nevertheless the position as regards trained teachers cannot yet be looked upon as satisfactory. Out of a total of 280,738 teachers only 88,169 or 31·4 per cent. possess training qualifications. The Government of India considered the situation sufficiently serious to address a circular to local Governments indicating the desirability of offering facilities sufficient to repair the annual wastage among the trained staff and provide for further expansion. At the close of the period the Government of India manifested its realisation of the prime importance of training by announcing an imperial grant of 30 lakhs a year for this object and also for improvement of the pay of teachers—a necessary adjunct of any large expansion in training facilities, since candidates are not forthcoming for the career of teacher unless it offers reasonable prospects.

The Secretary of State in 1916 sanctioned a proposal of the Government of Madras for the deputation of officers of the provincial and subordinate services to England and elsewhere for periods not to exceed two years, and on annual stipends not to exceed £200, *plus* certain expenses to enable them to study foreign systems and fit themselves by training for inspecting and professorial posts.

Education of girls.

54. Great difficulties are still encountered in the matter of girls' education. Social reasons such as the institution of *purda* in some communities, early marriage, etc., form a stumbling-block. The advance in the number of girls under instruction has been 29·1 per cent. during the quinquennium. But attendance is only 47·7 per cent., 38 per cent. of the girls are crowded in the most rudimentary classes and only 1·03 per cent. of the total female population is reckoned as enrolled at school. Of educational difficulties the greatest is the provision of a sufficiently large and well-qualified staff of lady teachers and inspectresses. In this respect there has been distinct improvement, the number of women under training being now 2,813, which represents an increase of 74·4 per cent.; and some of the homes instituted for the training of widows promise good results. A marked feature of the quinquennium has been the opening of two excellent women's colleges in Madras. The expansion of facilities for training and for collegiate education coupled with improvement in the general conditions of service may, it is hoped, render the supply of teachers easier in the future as well as tend to form public opinion. The extent to which the formation of public opinion has already proceeded is difficult to ascertain in view of the varying circumstances of different areas. Considerable interest, however, has been aroused during the quinquennium by Mrs. Fawcett's deputation to the Secretary of State, the meeting of various committees in India and the controversy which has continued over the education best suited for Indian girls.

Education of Europeans.

55. An important conference on the education of Europeans and the domiciled community was held at Simla in July, 1912. Although it has not been found possible to accept all the proposals of this conference, the exchange of ideas and the allotment of liberal grants have resulted in a marked expansion in this type of education. The number of pupils has risen by 23·8 per cent. and now stands at 42,545 which probably represents about 18 per cent. of the population. Special grants were made for the education of the poor in the cities of Calcutta and Madras and there is now little reason to suppose that any children of the domiciled community go uneducated. It is proposed to

establish a training college in southern India somewhat similar to the training class at Sanawar. The proposal to continue the special education provided for Europeans through the college standards has not met with approval. But an important development has been the establishment of an Anglo-Indian hostel for college students at Allahabad. This movement augurs well for the future of the community and a great opportunity is now offered for employment in India whether in the public service or in private concerns by the practical cessation of any recruitment from England. Notwithstanding the generosity of government, the education of this community continues to be characterised by a large amount of self-help in the nature of fees and subscriptions and 61·7 per cent. of the cost of a pupil's education is met from private sources. The Laidlaw Fund, opened shortly before the commencement of the quinquennium, now totals £100,000.

Education of Muhammadans.

56. The difficulties which have opposed the expansion of education and especially higher education among Muhammadans are gradually giving way. The percentage of Mussalman pupils to those of all communities bears almost the same proportion as the Mussalman population to the entire population, while the increase among Muhammadan pupils has been 17·6 per cent. as against 15·8 per cent. for those of all creeds. It is particularly encouraging to find that the community is beginning to take a larger share in institutions for higher education. The number of pupils in arts colleges increased by nearly 60 per cent., that in professional colleges by over 73 per cent. and that in secondary schools by 29 per cent. Even so, the number of Muhammadans in these institutions is incommensurate with the importance of the community. In 1913 the Government of India issued a circular to local Governments with a view to stimulating efforts. Conferences have been held as a result. Plans have been elaborated and grants have been allotted. Among special incidents of the quinquennium may be noticed two which have taken place in Bengal. The Mohsin Fund, a considerable portion of which was previously utilised for the maintenance of the principal *madrassas*, has now been freed for the establishment of Muhammadan scholarships, government undertaking the upkeep of the institutions. Secondly a reformed curriculum has been framed for the majority of these *madrassas* which will render them more suitable to modern conditions. In Bombay a lakh has been sanctioned for Muhammadan education in Sind—to be used mainly in the creation of scholarships. Special inspecting agencies and training institutions have likewise been established in several provinces.

Education of depressed classes.

57. There are few more important or more difficult tasks than the improvement of the condition of the wild tribes and depressed classes. The Government of India addressed local Governments generally during the period regarding these communities. For the first time it has been possible to include in this review an enumeration of the classes affected, their number and the number of those receiving instruction. It is hoped that this may prove a useful basis for future operations. But it is not to be supposed that efforts have been nugatory in the past. The resolution on the Bombay report speaks of the success which has attended the policy of concentrating members of the aboriginal communities in special settlements, where they imbibe the rudiments of civilisation. Large sections of the depressed classes, such as the Panchamas of Madras and the Namasudras of Bengal, can no longer be regarded as peculiarly illiterate. Here and elsewhere the missions have done praiseworthy work. If results on the whole appear small, these examples are not to be forgotten and the efforts which Indian Societies are now making on behalf of their less fortunate fellow-countrymen constitute a happy augury.

Scholarships.

58. Among measures which affect different branches, the provision of scholarships has been made more liberal. Apart from State scholarships tenable abroad, the total spent on this object in India has risen from ₹13,40,222 to ₹21,65,718 a year. Of this sum, ₹12,63,482 comes from provincial revenues, ₹3,80,000 from local and ₹52,982 from municipal funds, while the rest is derived from private sources.

In Bengal a portion of the Mohsin fund (an endowment for the benefit of Muhammadans) was as already stated set free for scholarships. It was necessary in 1912 to divide the Bengal scholarships between that presidency

and Bihar and Orissa. The list of scholarships drawn up for the latter province was a liberal one, the number in some cases almost equalling that previously allotted for the combined province. But it is considered that the number of primary and middle scholarships is insufficient, their value too small and the term of their tenure too short; new proposals have accordingly been made for that province which will add ₹80,000 to the annual expenditure. A number of new scholarships were created in Assam, largely for the encouragement of Muhammadans and backward races.

59. The State scholarships for study abroad were increased by the addition of a scholarship tenable by Indian women for three to five years, of the value of £200 a year, for professional training—mainly in medicine or teaching. The value of certain of the previously existing scholarships was raised from £200 to £250 a year in the case of students who enter a college at Oxford or Cambridge. The value of the oriental scholarships also was raised from £150 to £250 in the case of such students and to £200 in the case of others. The conditions governing technical scholarships were under consideration throughout the quinquennium and were revised soon after the close, with a view to affording a longer and more practical course.

The quinquennium was marked by considerable agitation regarding certain alleged grievances of Indian students in the United Kingdom. This question is dealt with in paragraphs 191 and 192.

Buildings.

60. Thanks to the imperial grants and to private munificence, there has been considerable building activity, of which brief accounts are given in the appropriate chapters. Progress has also been made in the framing of plans suitable for educational purposes. The total expenditure on these objects during the quinquennium was 789¾ lakhs—nearly 300 lakhs in excess of the imperial non-recurring grants. As enquiries are frequently made regarding the kind of institutions on which this expenditure is incurred, Directors were asked, if possible, to supply this information for the quinquennium. Some have done so; but some have been able to show figures only for 1916-17. In that year 27·82 lakhs were spent on colleges, 45·99 on Anglo-vernacular secondary schools, 37·09 lakhs on primary and middle vernacular schools and 8·50 lakhs on special institutions.* Details are shown in appendix II. The illustrations at the end of this volume show a few of the buildings erected during the quinquennium.

Expenditure on buildings is sometimes criticised. It is necessary, however, that pupils and teachers should be protected from rain and sun, and, in institutions above the primary, something more than a bare roof may be expected. Mr. Hornell points out that, paramount as is the need for more capable teachers, the effective teacher is certainly handicapped by inadequate class rooms and equipment and that there is a close connection between education and the standard of life. He gives a gloomy picture of the present condition of secondary school buildings in Bengal. They are described as unsuitable for school purposes, insanitary and over-crowded.

Libraries.

61. The importance of libraries as factors in the education both of the pupil and of the adult is apt to be overlooked when set text books and examinations dominate the curriculum. There has been some progress; but one could wish it had been greater.

The Madras University library, which is still housed in the Connemara Public Library but for which a separate building is now planned, received nearly 6,000 new volumes during the quinquennium and now contains 19,000. In 1914 it was thrown open to the public and has been used to a considerable extent. The University of the Punjab received a valuable gift in the shape of the Azad Collection of manuscripts presented by Agha Muhammad Ibrahim of Montgomery. The university library was overhauled and arranged by an American expert, who also delivered lectures on modern library methods to those interested in the work.

College libraries vary enormously—as do colleges themselves. Not many are possessed of large or up-to-date collections. An important college like that at Patna, though possessing a good library, receives an annual grant of only

* The Punjab figures refer only to provincial expenditure. For this and other minor reasons the total of these items falls short of the total shown in general table IV.

₹1,000 for its up-keep and the principal naturally complains of its inadequacy. School libraries are often deplorable and one of the Bengal inspectors states that they are composed of second hand books which, to judge from their miscellaneous titles, might have been bought by weight, and presentation copies of inferior text-books. In the libraries he examined this inspector discovered 'Gunshot wounds; their treatment,' 'Oriental crime,' 'History of the idea of the Devil and Witchcraft in all countries' and 'What and when to drink (a volume of recipes).' There is no doubt that many such libraries are full, if not of trash, at least of books which do not make interesting or suitable reading for school boys. In some provinces improvements are being effected. In Bombay, boys' libraries are being established with government aid as distinct from school libraries; they contain illustrated books of stories, fairy tales, travel and adventure. In Bihar and Orissa each district high school received in 1914-15 a sum of ₹500 over and above its usual annual grant. In Assam annual grants have been sanctioned for government high schools at rates from ₹125 to ₹175 according to the number of sections. The provision of attractive books which can be read with ease and interest is undoubtedly a matter of importance.

Pay of teachers.

62. But the principal reform of the quinquennium has been the raising of the pay of teachers. In the resolution of 1913 the Government of India recommended a minimum of ₹12 a month for trained teachers in primary schools and a scale of ₹40 to ₹400 in government secondary schools. The measures which have been taken are detailed in paragraphs 217 and 271. The average pay of those in government employ is that of the services to which they belong and is shown in paragraph 128. That of teachers in other employ is shown in paragraph 130. It is impossible to compute the average increase in emoluments. But a fair idea may be obtained by making a comparison of the number of teachers with the direct expenditure on educational institutions, which is made up mainly of the pay of the staff. Such a comparison shows that, while the number of teachers has increased by 30 per cent. in the quinquennium, direct expenditure has increased by 47 per cent.; or, to put it in another way, while the direct expenditure in 1911-12 gave an average incidence of ₹250 a year per teacher, that in 1916-17 gives an average incidence of ₹282.

IV.—Special developments.

Broader aspects of education.

63. This last section attempts to deal with points which were specially emphasised in the resolution of 1913—those vital aspects of education which affect health, character and the many-sided development of the mind—and to consider to what extent public opinion, which is an essential factor in reform, has moved in these and other directions.

Conferences.

64. There are few subjects which attract so much public criticism as does education. This is true of other countries as well as of India and in itself constitutes a healthy sign of growing interest. Elsewhere such criticisms are levelled not only at the central government, but at local authorities and private associations. In India the government bulks large by tradition, is regarded as the root of good or evil and must bear alone the impact of public opinion. Sometimes, too, educational controversies assume the guise of racial questions. It is apt to be forgotten that the number of Europeans engaged on educational work is very limited, that government has delegated many of its functions to local and other bodies and that a policy of reliance upon private effort has been steadily pursued. Nor is sufficient weight always given to the fact that non-official opinion is freely consulted regarding general lines of policy.

The quinquennium has been marked by the calling of a large number of conferences. A conference of Directors was held at Delhi in January 1917. His Excellency the Viceroy opened the proceedings and the main discussions were public. Important subjects, such as the constitution of the new universities at Patna, Dacca, Nagpur and Rangoon, the educational rules and grant-in-aid code in Madras, the pay of primary teachers in the Punjab, the general development of primary education in the United Provinces and Bihar and Orissa, engineering and industrial education and the establishment of a

school leaving certificate system in the latter province, the development of colleges and technical education in Assam, as well as, in most provinces, the special requirements of the education of girls and of Muhammadans, moral and religious instruction and school hygiene, have formed the subjects of discussion to which non-officials have been invited. A representative conference on the education of the domiciled community was held at Simla in 1912. There are few matters of importance on which a decision is made without full consideration of public opinion.

Courses and methods.

65. The growth of new interests, the introduction of more varied curricula and the establishment of examinations other than those which are designed to test fitness to pursue the ordinary arts courses are gradually providing a wider scope of subjects. In respect of courses, the chief feature has been a still further recognition of the claims of science, illustrated by the appointment of science inspectors, the creation of a faculty of science in the University of Bombay, the completion of the Royal Institute of Science in the same city, etc. The popularity of science courses is noticed in the Punjab, where one college has opened classes in industrial chemistry. At the Rangoon college the best students are reported to select science as their subject. The deliberations of an important committee on the inculcation of the imperial idea in Burma foreshadow certain changes in the course in that province, and those of the numerous committees which have met to consider the education of girls indicate the desirability of some modification of the curricula prescribed for them.

In order to rationalise methods, new avenues of instruction are being utilised and it is hoped that education will gradually become more realistic and less divorced from the actual life of the pupil. Attempts have been made to enlist the service of the eye and the hand in the process of instruction.

(*a*) *Visual instruction.*

66. Greater use has been made of visual instruction as a means of widening the pupil's outlook and impressing facts upon his mind through a process different from that of mere memory. The special efforts made in this direction in Bombay were the work of the Director, the late Mr. W. H. Sharp. In most provinces inspecting officers and the larger institutions are now provided with lanterns and slides. In Bombay each group of three board primary schools now possesses a set of stereoscopes and stereographs. Moreover students, especially of training institutions, are sent on excursions to places of interest in different parts of India.

(*b*) *Manual training.*

67. In 1913-14 the Government of India distributed seven lakhs non-recurring and one lakh recurring for manual training. The subject has not made much advance in *Madras*. Preparation had been made in *Bombay* for the introduction of sloyd and a number of teachers were trained. The financial position checked progress; it has been found possible to introduce the work into only a few schools; and the suitability of sloyd for Indian conditions is doubted. In *Bengal* it was decided to apply the available funds to the provision of a workshop and appliances, a teacher on ₹50 and material at the rate of ₹25 a month in each of 25 schools. Work has actually commenced at 19 schools and Mr. Hornell considers the keenness with which it is done as an encouraging feature and that its extension is a condition of any real advance in secondary education. The subject is taught in a certain number of schools in the *United Provinces* with varying degrees of success and popularity. A manual training centre has been opened at *Lahore* to which pupils of various schools come on different days of the week.* In *Burma* a special deputy inspector has been appointed to supervise the teaching of the subject, which is carried on in 44 schools. Classes have been opened at a few schools in *Bihar and Orissa* where, though attendance is optional, boys appear anxious to join them, and at two schools in *Assam*. The kind of manual work generally adopted in India is either sloyd, some adaptation of sloyd to Indian conditions, or some system of exercises in wood work. Metal work is hardly attempted save in the technical schools.

In primary schools simple forms of hand-work, such as clay modelling and paper folding, are generally done.

* Bureau of Education Pamphlet No. 1, *Drawing and Manual Training in Punjab Schools*, by J. Y. Buchanan.

On the whole; progress has not been so rapid as might have been hoped. There are difficulties of money and staff, and manual training, not being ordinarily prescribed for the matriculation, is consequently apt to be regarded as waste of time.

The medium of instruction.

68. A point connected with method is the demand made that vernacular should be substituted as the medium of instruction up to a higher stage than at present. A conference was summoned at Simla just after the close of the quinquennium to discuss this question. Allusion to the subject is made in paragraph 237.

Religious and moral instruction.

69. In the last review it was observed that some outcry had arisen against the purely secular character of the instruction imparted in the public schools. The attitude of State neutrality in India towards different religions takes the form of abstention from religious teaching, with exceptions presently to be noted, in publicly managed schools and non-interference with such teaching in privately managed schools, even when they receive aid from public funds. It is accordingly open to any school manager to introduce any form of religious instruction which he desires without foregoing the claim which he might put forward for a grant-in-aid. In Madras definite religious instruction is given in a number of privately managed schools. In the United Provinces, Bihar and Orissa and Delhi it is given in many denominational schools. Generally speaking, however, advantage is not largely taken of this privilege save in schools managed by Protestant missions. Secondly, certain relaxations have been permitted in publicly managed schools. In the United Provinces they may impart religious instruction for one hour a week to the children of parents who desire it, though the ordinary staff may have nothing to do with the instruction. In the Punjab instruction is allowed in board schools on similar conditions and on the further conditions that it is given out of school hours, in accordance with rules laid down by the local body and without imposing any charge on public funds. In Burma again religion may be taught in State schools, the conditions being generally similar to those enforced in the Punjab, the approval of the teacher by the inspector being also required, and ceremonies or acts of public worship in the school precincts being prohibited. Here (where practically all the pupils are Buddhists) the scheme is pronounced to have been a success. In the Punjab the results are stated to have been uncertain. In the Central Provinces and Assam there has been some relaxation in favour of religious instruction, mainly for Muhammadans. But very little advantage has been taken of it. Hence some doubt was cast upon the depth of the demand for religious instruction; and the difficulties in the way of its introduction were admittedly great, especially in the case of Hinduism.

70. The question both of religious and of moral instruction was discussed at the Educational Conference at Allahabad in February 1911 and subsequently, at the request of the Government of India, in most provinces. As regards moral instruction, a conference had already been called in *Bombay* in 1910. Mr. Gould had been invited to give demonstrations, a text book has been prepared and the subject was introduced, apparently with some success, in those training institutions and secondary schools whose teachers had had an opportunity of attending Mr. Gould's lectures. A consultative committee was also constituted, whose original enthusiasm, however, appears to have waned. A syllabus has been drawn up in *Madras* and action is contemplated. The teaching of temperance has been organised in *Burma* and persuasion against the habit of smoking in schools has had effect. The committee which met in *Bihar and Orissa* advised the devotion of a period a week to moral instruction, and this has come into force. The committees in *Bengal* and the *Central Provinces* considered that direct moral instruction is valueless, that such instruction should rather be the natural outcome of school life and discipline and that illustrations of high moral character may be used effectively. There is a general feeling that the character and conduct of the teacher is the most important point and that there is danger of the teaching becoming merely formal. The Indian boy is indeed probably more susceptible to aphoristic precepts than the European. But the value and reality of such a system become doubtful when we find him exhorted not to speak unpleasant truths or assured from the walls of his class room that might is right..

The local Governments and provincial committees exhibited considerable variety of opinion regarding the possibility and efficacy of religious instruction. The provinces in which an advance was most confidently recommended were Bengal and Bihar and Orissa. The former advised that religious instruction should be initiated, that the parents of a boy entering the school should be asked if they desired him to attend the religious classes and that preference should be given to members of the regular staff as religious instructors. In Bihar and Orissa experiment was advocated in selected areas; but difficulties have arisen and nothing has been done.

The conscience clause.

71. Much less has been heard from the point of view of the public about religious instruction during the period under review than in that which preceded it. Interest has begun to centre in the question of such instruction in mission schools and the desirability of introducing measures which, if they did not abolish, would at least tend to curtail it. The grant-in-aid codes ordinarily contain no conscience clause for Indian schools. Exceptions are the European school codes, save that of Bombay, and the rules for aid given by local bodies in Bihar and Orissa. These contain a conscience clause, confined in the latter to single-school areas. Protestant and some other missions ordinarily make attendance compulsory at Bible instruction. It is urged on the one hand that the absence of a conscience clause is a breach of religious neutrality and is opposed to the practice which exists in the United Kingdom and even in India as regards European schools, that public funds are being utilised for the support of institutions which insist on instruction in a faith which is not the ancestral faith of the pupils, and that the present arrangement tends to destroy their self-respect. On the other hand it is claimed that the religious instruction imparted is salutary in its effects; that it is largely non-dogmatic; that pupils and their parents have no real objection to it; that if they have the pupils can remove themselves to another school or the parents can take steps for the foundation of such a school; that the agitation is largely artificial; that compliance with it would merely put a stumbling block in the way of those who appreciate the instruction and would be subversive of discipline; that some of the mission bodies at home would stop their subsidies and that some missionaries in India would close their institutions, with the result that India would be deprived of the admitted benefit of missionary effort in education and the missions of the privileges which they have so long enjoyed and which induced them to commence their operations and to sink capital in land and buildings. A compromise, which was suggested as long ago as 1882, adopted by the Commission of that date but rejected by the Secretary of State, is the recognition of single school areas, *i.e.*, of areas which are served only by a Protestant mission school and where accordingly the absence of a conscience clause may be oppressive and should be removed. This idea has now been revived by some of those who have interested themselves in the controversy and is opposed by others as no real concession of the principle of freedom of conscience and as liable to bear hardly on children dwelling in multi-school areas who can find no room in non-mission institutions.

Boy Scouts.

72. A method of influencing character is the encouragement of organisations such as the Boy Scouts. In European boys' schools, the Boy Scouts Association has gained a firm hold. Eighteen troops are recorded in Bengal. The system is in full operation in the United Provinces, in several schools in Burma and elsewhere.

Girl guides also are found. Nearly every school in Calcutta possesses a company and the association includes Indians as well as Europeans.

Here and there enthusiastic officers have devised local scout systems. Such is the system in the schools at Belgaum and Karwar, the main objects of which are to inculcate a spirit of practical morality, to bring masters into closer touch with boys, to give a chance of distinction to those who cannot win prizes in the class-room, etc. Each scout takes a vow and passes a test in order to rise to the higher grades of the organisation in such subjects as games, cycling and gardening. Such also is the house system at Karachi, which is intended to secure that all, and not merely the most capable, should participate in games and feel some interest in their result. Mr. Chapman, I.C.S., has introduced a League of Honour in the schools of Berar. Various

societies with similar aims exist in the Central Hindu Collegiate school at Benares.

At the end of the quinquennium the Government of India addressed local Governments on the subject of the Boy Scouts movement in schools for Indians. It was pointed out that, while the formation of a body of scouts calls for no interference by government, yet officials when consulted should recommend the adoption of the general principles underlying the Boy Scouts Association and make sure that the commencement is made on sound lines, particularly in the matter of scout masters. At the same time the Government of India desired to see the establishment of troops in selected government schools. The association is at present unable to incorporate Indian troops in its own organisation, but is ready to give assistance and advice through its officers. The main difficulty is the paucity of scout masters.

73. The Government of India allotted an imperial grant of 25 lakhs non-recurring for school hygiene and invited local Governments to frame schemes. The non-recurring grant has facilitated the purchase of play-grounds, etc. But further development depends upon recurring resources. The scheme for medical inspectors in Bombay has had to be postponed. But staff has been appointed in the Punjab; and elsewhere considerable use is made of the regular medical staff. Such inspection is very necessary. It is reported from Madras that in one school inspected 44 per cent. of the boys were found to have defective eyesight; and in the Punjab, where medical inspection is carried out on a large scale, this is the case with 30 to 50 per cent. of those examined. Despite the regulations of the University of Calcutta on the subject, the recognised high schools, says Mr. Hornell, especially the unaided, continue to defy almost every principle of sanitation and hygiene. Considerable efforts have been made, by means of the imperial grants, to provide or improve play-grounds. This is difficult in the case of city schools. In Calcutta only six out of 15 colleges and 27 out of 57 high schools have any sort of playing space. Widely varying views are expressed as to the value of inter-school tournaments. But there can be no doubt that the introduction of organised games has had on the whole a healthy effect. *Hygiene and physical training.*

74. In some government colleges and also in some of the privately managed type, such as the Dayanand Anglo-Vedic College at Lahore, medical officers are maintained to look after the health of students. These officers are sometimes entrusted with the care of schools and hostels in the city. A certain amount can be done in towns. But the problem of medical inspection in village schools is a difficult one. *(a) medical inspection.*

In the Corporation elementary schools of *Madras* the medical inspection of pupils is carried out by a member of the Indian Medical Service and by a lady. A scheme has been sanctioned for the appointment of five medical officers in *Bombay* presidency on ₹500—50—800 (non-pensionable). These officers are to be under the department of public instruction and would inspect (but not treat) the children in publicly managed and aided secondary schools for boys, training institutions and their practising schools. The scheme is held up owing to financial stringency. In the meantime, weighing machines have been supplied to government secondary schools and training institutions, and the measurements and eyesight of each pupil are recorded every six months, physical defects being reported to parents. In the *Punjab* six assistant surgeons have been appointed as medical inspectors of schools. They annually visit every government, board and aided Anglo-vernacular school under their charge and examine each pupil in the secondary departments. Results are recorded and medical history cards are kept. Serious defects are brought to the notice of parents, but it is observed with regret that advice is frequently ignored, and headmasters are reported as not realising their responsibility for the health of pupils. A certain amount of inspection both of schools and of pupils has been carried out in *Burma*. In 1916 arrangements were made in *Bihar and Orissa* for a general medical survey of pupils in high schools at each district headquarters twice a year and for other high schools where possible. These are being carried out by the civil surgeons with the help of assistant surgeons, who also regularly visit all high schools near their hospitals. The inspection of buildings is entrusted to health officers in the municipalities where these exist, and similar duties are carried out by the deputy sanitary commissioners. A number of cases of defective buildings and of boys requiring treatment have been brought to light and necessary action has been taken. In the *Central Provinces* all schools in dispensary towns are inspected once a month by the sub-assistant surgeon, who examines the pupils and recommends medicines. In some districts travelling dispensaries and itinerant doctors treat the more remote schools. All hostels are under medical charge. Government and

board schools in *Assam* which are not more than two miles from a dispensary are inspected by the local assistant or sub-assistant surgeon, physical defects or diseases are brought to notice and the results have been beneficial. Medical inspectors have been appointed in two districts of the *North-West Frontier Province* for the examination of buildings and pupils, and medical treatment has been applied to many boys suffering from eye complaints and other diseases.

Although the achievement of the quinquennium has not been so great as might have been hoped in normal conditions, this account of the action taken has been inserted at some length because of the importance and the novelty of the subject in India.

(b) sanitary examination of building-plans.

75. Building regulations based on hygienic principles have been laid down in *Bombay* and plans of all buildings have to be submitted for examination from the sanitary point of view. The committee which considered the subject of hygiene in *Bengal* proposed the appointment of a special Deputy Sanitary Commissioner, who would inspect buildings and draw up directions for lighting, ventilation, etc. In *Bihar and Orissa* the inspection of buildings, as already stated, is carried out by health officers and deputy sanitary commissioners. Plans of buildings costing over ₹500 are examined by the Sanitary Commissioner, and of those costing less by the Civil Surgeon. Large sums have been spent on the acquisition of land for rendering school sites more healthy. Standard plans for different classes of schools and for hostels have been published in the *Central Provinces*.

(c) prophylactic measures against disease.

76. In some districts of the *United Provinces* much progress has been made in extending the use of quinine as a prophylactic. Wherever introduced it appears to have produced satisfactory results and its efficacy is now generally admitted by parents and children. In the *Central Provinces* various protective measures have been taken. Though vaccination is compulsory only in municipal areas, the number of unvaccinated children is very small.

"Pamphlets on village sanitation and leaflets on epidemic diseases have been supplied to all schools and were explained to pupils. Almost every school boy now knows the precautions to be taken in epidemics of plague, cholera, malaria, small-pox, etc. The number of teachers and pupils who voluntarily offered themselves for inoculation against plague has risen steadily. Systematic provision is made for the sale of quinine by school masters, which has grown very rapidly. An interesting experiment was made of quininising school children in hyperendemic areas of some districts. In Seoni and Betul districts the Deputy Commissioners inaugurated most valuable work. The children were given doses of quinine by teachers as instructed by medical officers and the results were recorded in registers opened specially for the purpose. The experiment yielded satisfactory results. Smoking is strictly prohibited by departmental rules which prescribe corporal punishment for pupils found smoking on school premises."

It is also recorded that during visitations of plague many schools are maintained near health camps under trees or in temporary structures provided by government, the boards, committees, or private bodies, and a good percentage of attendance was kept up.

(d) the teaching of hygiene.

77. Hygiene is prescribed for the vernacular final certificate in *Bombay* and as a subject of the new science syllabus in secondary schools. A new book on the subject has been compiled. Lessons on temperance on the lines of the Board of Education's syllabus are given in government secondary schools. Arrangements have been made in *Bengal* for lectures at high schools and first grade normal schools, delivered by assistant surgeons, on hygiene and sanitation, especially the prevention and cure of malaria. In some districts of *Bihar and Orissa* lantern lectures are given on malaria, and at these lectures quinine is distributed free. A series of lectures is also given at the larger training institutions and it is proposed to extend this practice to high schools. First aid and hygiene classes have been opened at the normal schools in the *Central Provinces*. Hygiene lessons are prescribed in the normal schools of *Assam*, in vernacular schools for boys and in both vernacular and English schools for girls. Courses of instruction have been given to teachers in the *North-West Frontier Province*.

(e) first aid, etc.

78. First aid is included in the science curriculum for standard VII in Bombay and classes have been organised in all government and many aided high schools with the co-operation of the St. John Ambulance Association.

Elsewhere it is voluntary. In 1916-17, 21,381 teachers and pupils went through courses of instruction in first aid and 126 in home nursing; 871 and 100 certificates were awarded respectively in these two subjects. The number of certificates was small in comparison with that of those under instruction. But it is probable that the figures of examinations in March 1917 and in subsequent months will, when fully collected, show considerable improvement.

Hostels.

79. The hostel system is important because it facilitates the attendance at institutions of pupils who do not reside at large centres, offers a safeguard against the influences which assail students of the *mofussil* when they repair to the cities, fosters community of life and affords opportunities for management and responsibility on the part of the senior boarders. There has been considerable expansion of the system during the period. The number of hostels has risen from 2,796 to 4,045, and of boarders in them from 107,383 to 152,570. Details regarding the prevalence of the system in different kinds and classes of institutions are found in general table VIII. The calculation of recurring cost previously given in that table had been found to present difficulties; hence only the capital cost is now shown, amounting to nearly 23 lakhs in 1916-17.* The Government of India gave grants for hostel construction during the quinquennium amounting to ₹1,32,82,000 and a recurring grant of 5 lakhs.

80. Hostel life is coming to be popular in colleges. The Punjab report speaks of the marked preference shown by the student population for residence in hostels and the effort made by the managers to encourage this feeling and to provide accommodation under their own immediate supervision. Many colleges are now practically residential and reports emphasise the good result. The system is coming to be regarded not merely as a convenience but as contributing wholesome elements to a general education. The necessity of proper supervision and the desirability of providing on the spot for the residence of the staff, are also realised. Nevertheless, in India as a whole, only 28 per cent. of the students in colleges reside in hostels. In Bengal the percentage falls to 13. In large cities like Calcutta many of the students live with their parents and guardians (a feature which is common in smaller centres also) and the difficulties of finding suitable accommodation for immigrant students are very great. Notwithstanding that imperial grants aggregating 57 lakhs (including a grant of 10 lakhs to the university and excluding a recurring grant of 1·32 lakhs) were allocated to Bengal for hostel construction and that the Government of Bengal assist in paying the rent of 'messes' (hired houses where students reside), the condition of things cannot be regarded as satisfactory in Calcutta. The university permits, as an alternative to residence in hostels or with guardians, attached messes, which are supported from public funds and confined to the students of one college,† and unattached messes, in which these conditions are not fulfilled. Unattached messes are popular, especially with students who come from the same locality but read in different colleges. They are also stated to be cheap and convenient for those of the same caste—statements which are contradicted. They are but little supervised and the measure of independence which they offer may, Mr. Hornell suggests, be a reason for their popularity with students who, as a *mofussil* headmaster put it, are attracted to Calcutta by the amenities of the metropolis. Residence with guardians is obviously open to abuse, and sometimes one student is the guardian of another. Thus the existing regulations do not ensure satisfactory residence and supervision: and even so, they are not fulfilled. An enquiry made early in 1917 showed that 4,584 students in Calcutta were living under conditions which had not received the approval required by the university regulations; this number included 965 students who were not members of colleges but reading in university post-graduate

* Instead, Directors have supplied calculations of the cost of living in hostels. This varies considerably according to the locality and to the kind of diet adopted by the student. In Madras the average cost in a college is ₹11 a month, in a secondary school ₹6¼. In the large Victoria hostel in Madras city the cost is ₹20. In Calcutta the average in hostels and attached messes is ₹14 to ₹15 and in unattached messes ₹16. In the Punjab the cost in a college hostel varies from ₹8¾ to ₹27. In Patna the cost in a college hostels is ₹8 to ₹12½ and in a school hostel from ₹7 to ₹8. In Assam the cost in high school hostels (₹10 to nearly ₹13) appears to be higher than that in college hostels (₹8 to ₹9½). In the case of European schools the cost is generally higher—₹15 a month in the Central Provinces, ₹14 to ₹26 in Madras and up to ₹36 in Assam.

† The distinction between the attached and the unattached mess has been weakened by a regulation which, in special and exceptional cases, permits students of other colleges, or a pupil of a recognised school who is nearly related to a member of the mess, to reside in an attached mess.

classes. Mr. Hornell indeed considers the residential problem in Calcutta to be insoluble in existing conditions of college life. In some towns, *e.g.*, Dacca and Bankipore, arrangements have been made for organisation and supervision by special officers or by committees.

In secondary schools the problem is less pressing, because these are more widely distributed and hence pupils can generally attend from their homes. Nevertheless, nearly 8 per cent. of the pupils now live in hostels. The proportion of primary school pupils who live in hostels is naturally small. In Madras, where an elementary school may contain higher stages, there are over 10,000 pupils in hostels. They are fairly numerous in Burma and in certain hilly tracts, like Kumaon, where hamlets are scattered and difficult of access, primary school hostels are a necessity.

Discipline.

81. Of discipline generally it may be said that positive acts of unruliness (with some regrettable exceptions to be noticed) are rare. The Indian student is ordinarily hard-working and quiet. But the standard of discipline exacted in many institutions is not high. There is a tendency to question orders which seem to involve any inconvenience and to seek for excuses and extenuating circumstances. It is significant that Mr. Südmersen regards it as a matter for congratulation that the presentation of petitions by school boys for the cancellation of orders which they do not approve is growing less frequent. The same authority writes as follows. "Complaints are from time to time made that the habits of school boys and their general demeanour are in sharp contrast with those of their parents, that the old ways are dying out, and that the new ways are bad ways. Some changes are inevitable, but the evils of a little knowledge are admitttedly great evils. In a period of transition, when knowledge remains but the possession of a few, it undoubtedly tends to inflated ideas and to an undue, and often impertinent, assumption of superiority."

82. Owing to the multiplicity of secondary schools and laxity regarding the rules of transfer, it is easy for a pupil who feels himself aggrieved by a punishment or is refused promotion to retaliate by leaving the school, by bringing reckless charges against members of the staff or by writing anonymous complaints to those in authority. The Director in the Punjab complains that teachers are sometimes privy to such conduct; and it is to be feared that it is sometimes more than connived at by parents, who do not always instil into their children a due feeling of respect for teachers and threaten a boy's removal when he is visited with punishment or detention in a class. Nor is the position of the teacher strengthened by school managers, who desire to increase numbers and fee receipts and in some parts of Bombay employ touts to lure pupils from one school to another. Hence teachers are not encouraged to maintain discipline, especially when their salary or position depends on the amount of fees brought in. A Bombay inspector, who questioned young teachers as to how they punished, found that the punishments they gave were puerile, and one, asked what he would do if a boy threw a book at his head, said that he would warn him.

83. Some of the reports speak of serious breaches of discipline. There were strikes in two government high schools in Burma, caused by firm action, succeeding a period of easy discipline, by new principals. This action was in one case directed against the use of dishonest means in examinations. In neither case did the principal receive from his staff as a whole the support he had a right to expect. In other cases the outbreaks are traceable to political or allied causes. Attempts have been made to attract students to meetings where intemperate speeches are made and otherwise to inoculate them with sentiments which are liable to culminate in violent action. Thus Mr. Mayhew says that in Nagpur political meetings and agitation have occupied the students' minds to a most undesirable extent. "Political speakers have found in the students an audience easily moved by eloquence to sympathy and applause and students have obtained from the meetings that excitement and stimulus which adolescence demands." In view of the violence assumed by the Home Rule agitation it was found necessary to issue orders in several provinces prohibiting the attendance of students and pupils at political meetings or reminding principals and headmasters of their responsibilities in the

matter of discrimination between suitable and unsuitable meetings. These rules caused some disorders in the Central Provinces and Madras, which were encouraged by agitators. The excitement, however, appears to have passed away.

84. The part played in anarchist outrages by pupils and ex-pupils of certain educational institutions in Bengal (and to a lesser extent elsewhere) is a lurid one. The promoters of disorder regarded the schools as a favourable ground for recruiting agents of their designs and an organised attempt was made to corrupt pupils through senior students and teachers who were insinuated into appointments for this very purpose.

Mr. Hornell mentions much indiscipline in Bengal. "This took on a definite political form in 1914; it was aggravated by the wide and reckless dissemination of seditious leaflets throughout the presidency about this time. The campaign was clearly designed to work up the student community against British rule. Many students were arrested at different times and most of these have since been interned." He records the murder of two headmasters of government high schools, a pupil having in one of these cases been convicted of the crime, and four strikes in Calcutta colleges, two of which took place in government and two in privately managed institutions. As regards the strike in the Presidency College, he states that the Students' Consultative Committee, instituted in 1913 to bring the principal into touch with the opinions and needs of the body of students, played an unworthy part and that it is regrettable that the first attempt at a students' constitution has failed.

Attitude of the public.

85. Efforts have been made during the quinquennium to enlist the interest of parents by meetings and by the circulation of reports on progress and conduct. Remarks made by the Directors appear to show that the efforts made in this all-important direction have not been thoroughly successful. One of the provincial reports observes that, as a controlling agency, parents limit their desire for control to the promotion list and the headmaster's responsibility to the examination results, but in other matters assume no responsibility themselves and are surprised at its assumption by the headmaster. As a matter of fact, the parent is usually anxious that his boy should be well-educated, that his character should be properly formed and that he should be brought up in healthy surroundings. Circumstances, however, are against him. He is naturally easy-going with his children and is apt to pay considerable attention to their point of view, especially if they happen to be more highly educated than himself. The teacher does not command the respect which is his due; he is often poorly paid and dependent on fees; his advice, if indeed it is given, is too often ignored. The boy has got to qualify for a profession by passing certain examinations. It is the duty of the school to enable him to pass them; and any failure in this respect and the addition of any activities which will interfere with his efforts to that end are deprecated. Finally, the parent reads his newspaper and too often gathers therefrom an erroneous view of education.

For there is no denying the fact that, while public interest in education has increased, public opinion, so far as it is expressed, often remains crude or unformed. Press utterances are frequently actuated by vested interests or political motives. The criticism of measures of reform is attractive and the student community is a valuable political asset. There is a tendency to lower standards and to oppose their improvement. If the percentage of success at an examination decreases, the university is blamed for depriving young men of the opportunity of acquiring knowledge. Publicists support pupils in acts of indiscipline, openly blaming the teachers and deprecating punishment. The resolution on the report from the Central Provinces, while recognising assistance given, notices the destructive nature of criticisms and the absence of any spirit of liberality despite oft-repeated professions of interest in education.

Below these manifestations there is a great body of sound public opinion. Nor is it always inarticulate. A not unimportant section of the press has, during the quinquennium, approached educational questions in the spirit of the educator. Appreciation has been shewn of genuine efforts to broaden the basis of instruction, and to improve the general conditions of college and

school life. This is a hopeful sign. But before a thoroughly sound advance can be made, it is essential that educational questions should be regarded on their own merits, that the teacher should come into his own and that due values should be set upon the respective merits of knowledge and of understanding.

CHAPTER IV.

CONTROLLING AGENCIES.

I.—General.

General system of control.

86. Education in India is not controlled by legislation. It is not incumbent on a parent to send his children to school. Nor is any person deterred from opening an educational institution. The Acts which embody the powers of local bodies lay upon them the obligation to provide facilities for primary education, or permit them to make provision for this and certain other forms of education. The universities have been created by Acts of incorporation and reformatory schools are governed by legislation. But up to the close of the quinquennium there were no Acts of more general application.

The Government controls education through codes of rules and executive orders. It maintains a few institutions. But the majority are managed by local bodies and private associations or individuals.

The department of education in the Government of India.

87. The Government of India does not control institutions,* but considers questions of general policy, correlates when necessary the lines of advance made in the various provinces, examines, approves or submits to the Secretary of State for India, schemes which are beyond the sanctioning power of the local Governments, and allots imperial grants. With a view to the administration of these increasingly important problems, the Executive Council was enlarged in 1910, by the addition of a Member for Education, whose portfolio also includes sanitation, local self-government, archæology and other matters. The first member was Sir Harcourt Butler. During his absence in 1915, Sir Claude Hill and Mr. Ludovic Porter acted in the post. At the close of that year Sir Sankaran Nair assumed the membership. The department attached to the Member consisted in the first instance of two secretaries, one of whom (called the joint secretary) was in special charge of educational cases, while the other (aided by an assistant secretary) was in charge of the remaining branches. In April 1915, this arrangement was altered. It was felt that there should be an officer attached to the Government of India who would be able to tour and keep himself in touch with the local Governments without interfering with their discretion or interrupting the process of decentralisation. The secretaries were reduced to one, whose duty it is to submit all cases to the Member. A post of Educational Commissioner was created. This is really a revival of the post of Director General of Education, which was abolished in 1910. The Commissioner tours extensively, discusses questions with local Governments and advises the department on educational cases. At the same time a small bureau of education was re-established for the collection and dissemination of information, etc.

Provincial departments.

88. The actual administration of institutions, so far as it rests with the State at all, is in the hands of the local Governments, which are provided with departments of public instruction.

Local and private bodies.

89. The majority of institutions, however, are, as already stated, actually managed either by local bodies or by private agency. Generally speaking, the former are entrusted with primary education. The latter specially interest themselves in higher education. But many primary schools, too, are privately managed, the teacher often being himself the manager. The

*There are a few exceptions. The Government of India exercises in relation to the University of Calcutta the powers which are ordinarily assigned to a local Government. The other exceptions concern institutions of research rather than of education.

departments of public instruction control such institutions indirectly, through the grant-in-aid rules, examinations, the award of government scholarships and so forth. They exercise a more direct control over the small number of government institutions which are to be found in each grade of education.

II.—Direction and inspection.

Direction.

90. A provincial department of public instruction ordinarily consists of a Director, aided by an Assistant Director and a central office. This is the organisation now found in all larger provinces. Bihar and Orissa and the Central Provinces each obtained the services of an Assistant Director during the quinquennium. In Bengal, where work is particularly heavy, there is, besides the usual Assistant Director, an Assistant Director of Muhammadan education. In the United Provinces, in addition to the Assistant Director, the registrar of examinations also gives some general assistance. In order to cope with the additional work entailed by the imperial grants, special officers were temporarily attached for a time to the offices of the Directors in Madras and Bombay. In smaller administrations the arrangement is modified. There is no Assistant Director in Assam. Baluchistan, which up to this quinquennium was under the Director of the North-West Frontier Province, has now been separated and has a Superintendent of education, who is also headmaster of the Sandeman High School. In Ajmer-Merwara the Commissioner is *ex-officio* Director, with the principal of the local arts college as inspector. In Delhi education is under the general control of the Punjab Director, though there are now a district inspector and an assistant superintendent for female education in the province. It is intended to make Delhi and Ajmer-Merwara into a separate educational charge. In Coorg and Bangalore inspection is arranged from Madras.

91. A director of public instruction controls the inspecting staff and, so far as it is employed by government, the teaching staff; he allots grants and sees that the provisions of the local code are observed; and in these matters he acts as the agent of the provincial Government whose approval he is required to secure in affairs of importance. He advises the local Government as to the educational policy to be pursued and, when the policy is decided, is responsible for carrying it out. His proposals to the local Government are made through one of the secretaries to Government. The Secretary is a member of the Civil Service. The only exception is in the Punjab. There the Director is also an under-secretary and largely performs the functions of a secretary.

92. A notable move during the quinquennium has been the delegation of powers from the local Governments to the Directors and from the Directors to the inspectors and to college authorities. The reports from Bombay and Bengal make special mention of such delegations. It is needless to enumerate them all. They apply for the most part to matters such as the signing of bills, the granting of leave to subordinates, extended powers in respect of grants-in-aid, travelling allowance, re-appropriation between sub-heads, the sanction of pensions, purchase of equipment, etc. But the following changes, carried through in Bengal, deserve special mention. The Director can now appoint, transfer, dismiss and in other ways control members of the lower grades of the provincial educational service and officers of similar pay outside the graded service—a power which previously belonged to government. Inspectors can appoint to posts carrying initial salaries of ₹100 a month or less outside the graded service. Governing bodies and principals of government colleges have been given a similar power and can also exercise it in grades of the services indicated by the Director, provided the pay does not exceed ₹100, or, in the case of the Presidency, Sibpur and Dacca colleges, ₹200 a month. This last delegation is of particular significance, since it marks a stage towards antonomy on the part of colleges.

93. During the quinquennium the death occurred of Mr. W. H. Sharp, Director in Bombay, and the retirement, owing to ill-health, of Mr. Wright, Director in the Central Provinces. Mr. Godley, Director in the Punjab, also retired on the completion of his service.

Inspection.

94. The inspecting staff is maintained by government, with the exception of a few officers appointed by local bodies. The organisation varies slightly from province to province. Generally speaking, the unit is the revenue division, with an inspector in the Indian or the provincial educational service. In Bengal, where schools of the secondary type are numerous, second inspectors are added, subordinate to the divisional inspector and ranging over a circle which comprises one or more districts. In the Punjab, too, the aim is to have two inspectors in each division—though this has not yet been fully carried out. Inspectors (or, in Bengal, second inspectors) are aided by assistant inspectors, to whom are delegated particular pieces of work or the inspection of special institutions. All these officers are closely concerned with secondary schools and training institutions (they do not generally inspect colleges). But the inspector is in general charge of all educational operations in his division or circle and naturally sees a certain number of primary schools. Besides inspecting, he advises the divisional Commissioner regarding general policy, distributes grants within his powers, controls the subordinate staff, etc.

The detailed inspection of primary schools, the smaller training classes, etc., is undertaken by deputy inspectors. Each district has a deputy inspector. He is a government servant and subordinate to the inspector, but is likewise the agent of the district board—a dual arrangement which, in practice, produces little or no difficulty. The deputy inspector again has under him sub-inspectors or assistant deputy inspectors, to each of whom is generally allotted a portion of the district. In Bengal the principal deputy inspector in each district is called the district deputy inspector, and posts of deputy inspector are interpolated between him and the sub-inspectors.

There are other inspecting officers—supervisors in Madras, assistant sub-inspectors and inspecting *pandits* in Bihar and Orissa and Bengal. The tendency has recently been to abolish these low-paid posts and to increase the number in the higher grades. But occassionally the numerical weakness of the superior staff and the inadequacy of funds necessitate the retention or even the creation of such posts.

Special inspection.

95. Inspectresses are employed as far as possible for the inspection of girls' schools. There are also special inspectors for European schools and for Muhammadan education and the teaching of Arabic and Persian. Mention is made of these agencies in paragraphs 403-404, 455, 490 and 308. Occasionally the inspectorship of European schools is combined with that of training institutions. In the Punjab the principal of the Central Training College is inspector of normal schools. The relations of the departments with technical institutions are described in paragraph 344.

Special subjects taught in the schools have begun, to some extent, to demand expert inspection and their claims have received further recognition during the quinquennium. Madras has two inspectors of manual training, the Punjab an inspector of this subject combined with drawing and Bombay an inspector of drawing. Bombay and the Punjab have each an inspector of science work in schools. The United Provinces has an inspector of Sanskrit teaching in English schools, an inspector of Arabic *madrassas* and another of *pathshalas;* Bihar and Orissa has an assistant superintendent of Sanskrit studies. Most of these offices are of recent creation. Work has improved under their care, but the distances to be travelled are great and it is sometimes difficult for the special inspector to do all that is required of him.

The organisation of medical inspection was hampered by the war. Paragraph 74 has described what it has been possible to accomplish. At Dacca and Bankipore there are inspectors of students' residences.

Organisation and methods.

96. The last review stated that efforts were being made to secure better co-ordination between inspecting agencies. These have been continued, and the relations of officers of different grades to one another, of the ordinary inspecting staff to the special staff for girls' schools or for Muhammadan education, etc., have been more clearly defined.

The work and responsibilities are largely distributed on a territorial basis. The reports contain clear descriptions of the organisation. The

following, from the Bombay report, may be taken as fairly typical, save that, in some provinces, inspectresses have now been invested with administrative functions.

"The educational inspector inspects high schools, government middle schools and primary training institutions, and visits as many institutions of other classes in his division as possible. The deputy inspectors with the help of assistant deputy inspectors arrange for the examination or inspection of all public primary schools, most middle schools and certain other minor industrial and technical schools in their districts. They assist in the inspection of high schools in their districts, as well as in the scholarship, vernacular final and training college examinations. The examination of normal classes in the district is also held by the district inspecting staff. They visit private schools and in deserving cases advise managers to get them registered. They hold conferences of teachers, explain the methods to be followed in the teaching of different subjects, watch model lessons being given by teachers, criticise these lessons, and give model lessons themselves. In the schools inspected or visited by them they direct and guide the work of teachers and leave notes in the log-books for their guidance. They re-visit these schools to see how far the instructions previously given have been followed. One of their most important duties during inspection tours is to increase the number of pupils in the schools by advice to the villagers. Another important part of their work is to pay surprise visits to schools, to ascertain whether the teachers are at their posts and to gain an insight into the normal working of these institutions. They study the educational needs of their charges, visit villages that are likely to support schools, and make enquiries as to whether special facilities should be afforded to backward communities. The inspecting staff of each district is provided with lanterns and lectures illustrated by lantern slides are frequently given. They are expected to keep in touch with the higher revenue and other district officers, to discuss educational questions with them, and to invite their co-operation in any important educational question that may be under consideration at the time. The inspector of European schools, the special inspectors of science teaching and drawing, the inspectresses of girls' schools, the special Muhammadan inspectress of Urdu girls' schools, the special Muhammadan deputy inspectors of Urdu schools and the Bombay deputy inspectors are not administrative officers in the same way that the divisional educational inspectors and the district deputy inspectors are; they are purely inspecting officers, whose duty it is to go round and inspect the schools in their charge and to report on them with such recommendations for their improvement as they think necessary."

The same report contains a description of methods.

"Since the abolition of capitation grants based on examination results by the grant-in-aid code of 1903, the method of inspection rather than of examination, full and detailed in each subject and of each pupil, has been adopted as the means of judging the work and general efficiency of all aided and recognised schools. To government secondary schools also the same principle is applied, and the headmasters are not required to await a regular examination of their schools from the inspecting staff for the purpose of class promotions. They arrange for the examination of their schools themselves and the inspector at his annual or other visits inspects the institutions, tests their progress and general working, satisfies himself that the class promotions have not been injudiciously made, and offers such criticism as he considers necessary."

The movement is in the direction of advice and demonstration of teaching methods. But rigorous investigation is no doubt also required to keep many teachers up to the mark, especially when the school is remote and seldom visited.

Numbers of the inspecting staff.

97. The quinquennium has seen considerable increases of staff. New inspectorates have been created—one in Madras presidency with headquarters at Bangalore, one in Burma for the Arakan Division, two in Bihar and Orissa for the Tirhut division and one for the district of Angul and the Orissa States, and two in the North-West Frontier Province. To these must be added the new posts of special inspectors, temporary appointments of personal assistants to divisional inspectors in Bombay and large increases of the subordinate staff, such as the creation of 49 posts of sub-assistant inspector in Mādras.

The numbers of officers in the different grades are shown in appendix III for the different provinces. For all India there are 81 inspectors, 86 assistant inspectors, 388 deputy or district inspectors, 1,041 sub-inspectors or officers of similar grade, 240 supervisors, 289 inspecting *pandits*, 16 inspecting *maulvis*, 31 inspectresses, 37 assistant and sub-assistant inspectresses—a total of 2,209 officers. This calculation includes a certain number of posts which are sanctioned but not filled.

Cost.

98. The cost of the inspecting staff in 1916-17 was R49,64,587, being 4·4 per cent. of the total expenditure on education and 6·3 per cent. of the direct expenditure against 7·6 per cent. in 1911-12. The percentage on direct expenditure is 5·85 in Madras, 5·2 in Bombay and Bengal, 5·9 in the United Provinces and the Punjab, 14·4 in Burma, 9 in Bihar and Orissa, 7·9 in the Central Provinces, 10·7 in Assam, 6·4 in the North-West Frontier Province and 2·6 in the minor administrations. This large expenditure is often made a cause of complaint. It is difficult to institute comparisons with other countries. The percentage of the cost of direction and inspection in India is 9·5 of the total expenditure on education from public funds. In England and Wales it would appear from the latest available figures that the cost of administration (including inspection, legal expenses, etc.), is 6·6 of the total public expenditure on education. Special causes which necessitate a strong inspectorate in India are the distances to be travelled, the lack of unofficial supervision and the poor quality of many of the teachers, who require constant vigilance and advice. Moreover, the cost of the establishment is bound to loom large in the general bill for education while the pay of many teachers and consequently the upkeep charges of many schools remain deplorably low.

Inadequacy of inspecting staff.

99. If the number of schools which each officer is required to inspect is taken as the criterion, the inspecting staff must still be pronounced inadequate. A subordinate officer cannot effectively inspect more than 80 primary schools in the year, if he is to see each at least twice. Even this is a heavy burden. Yet in Madras each inspector has to see 46 secondary and training schools (the inspection of which occupies a longer period than does that of a primary school), let alone a number of lower grade schools sufficient to check the work of the subordinate staff; a sub-assistant inspector has on the average 196 schools in his charge and an assistant and a sub-assistant inspectress 153. In Bengal there is an average of 114 public institutions per officer. In Bombay things are better, each officer being in charge of an average of 72 schools and rather over 4,700 pupils. (The standard expected in this presidency is the inspection of 3,000 pupils for a deputy inspector and 5,000 for an assistant deputy inspector.) For the whole of India the number of institutions per inspecting officer is 87. On the one hand this figure includes a certain number of colleges and schools which are not inspected by the usual agency. On the other hand, the total of officers includes officers of all kinds—special inspectors, inspectresses, supervisors and inspecting pandits (who cannot be regarded as full units for inspecting purposes) and others whose duties are of a particular character. The number of boys' middle and primary schools per each officer of the rank of a deputy or sub-inspector is 91.

The reports complain of the numerical paucity of the staff, whose work is made more arduous by the devolution of powers (in itself a necessary reform), the recognition of instruction as an important part of inspecting duties, the growing complexity of the work and the necessity of co-operation with newly created educational bodies.

The problems of inspection.

100. The most urgent problems are the following. First and foremost, the superior staff is mainly engaged with the growing number of higher institutions, training schools, etc., and with office work. Hence it has little time to devote to primary schools. This means that the subordinate staff receive insufficient supervision and the idea spreads that, because the inspector does not so frequently visit primary schools, they are of minor importance. This is specially to be apprehended when the subordinate staff, as often happens, is drawn from the town population and is apt not to appreciate village life and its problems. Second, the subordinate staff itself is frequently so over-burdened with work that inspection must needs be cursory. Third, the pay and status of the subordinate staff are insufficient. This is the case (save in Bombay) with the grade of deputy inspectors, whose duties are important. The secondary education schemes which have been sanctioned for Bengal and Bihar and Orissa contemplate the creation of a district inspector in the provincial service in each district, the posts of assistant inspector being absorbed in this new grade. This reform, at present delayed by the war, will provide each district with an educational officer qualified to advise the magistrate and the district board and adequately remunerated for

his work. Fourth, the office accommodation of the deputy inspector and his subordinates is often insufficient, being frequently merely a room in the board's office; and, in many localities, the provision of houses for the subordinate staff is required. Finally, though the basis of work must long remain territorial, the growth of specialisation and of industrial and commercial developments will render necessary the appointment of a larger number of specialists, the need for whom is already felt.

III.—Other agencies of control.

Civil officers.

101. The civil authorities are concerned with education, as with all branches of administration. In especial, the district magistrate is, as such, required to look into the state of schools and, since he is generally chairman of the district board, is particularly interested in primary institutions. In this latter capacity he has a large voice in the framing of the board's budget, though the portions of it which deal with education are submitted through the inspector to the Director, who can lodge an appeal against them. Civil officers inspect schools on their tours. The reports speak of the cordial relations existing between the civil authorities and the educational officers.

Universities.

102. The universities form an important agency of control, since they exercise the various powers described in chapter VI, have a free hand regarding standards and examinations and thus regulate the attainment of students in schools and colleges. A university is kept in touch with the department of public instruction by the presence of the Director *ex officio** and of other members of the educational service upon its councils. Its relation with the government is secured in various ways—the head of the administration is ordinarily the Chancellor; where there is Council government, the members of Council (or at least some of them) are included in the senate; and government possesses various powers, such as the sanction of regulations.

Standing boards and Committees (a) advisory.

103. There are a certain number of standing committees. The oldest is the educational syndicate in Burma, which was incorporated by legislation in 1860. It conducts certain examinations, mainly the tests in theoretical knowledge for teachers under training. But its chief function is advisory; and government and the department consult it when important educational questions arise. Two-thirds of its members represent non-educational interests and nearly half are non-official.

Another example of advisory committees was the female educational committee in Eastern Bengal and Assam. There is now a single committee of this nature for Bengal.

A recent and important development is the establishment of a board of education in the United Provinces including official and non-official members interested in educational problems. The functions of this board are advisory.

Another type of standing committee, which is found in all the larger provinces, is the text-book committee which advises government as to suitable books for use in schools. A description of the operations of these bodies will be found in chapter XXII.

(b) examining.

104. A board of examiners was previously constituted for the conduct of some of the departmental examinations in Eastern Bengal. This board has been abolished. A similar board, which at the same time was created for Assam, has been split up into a number of smaller bodies for the management of different kinds of examinations. In Bihar and Orissa a school examination board on similar lines was constituted in 1913 for the control of examinations of training institutions. It is said to have standardised the examinations and to have improved the quality of work done in the lower class institutions. The boards of technical and Sanskrit examinations in Bengal are mentioned in paragraphs 225 and 307. There are also boards for conducting school-leaving examinations.

(c) administrative.

105. In addition to the local bodies, presently to be described, attempts have recently been made to create committees which would exercise some control over educational matters within defined areas. It is natural that com-

* In the Benares Hindu University the Director is on the Senate but not *ex officio*.

mittees of this nature should be established in Burma where district boards do not exist. At the end of the quinquennium divisional school boards and a Rangoon school board were created in that province to facilitate the participation of civil officers and non-officials in the conduct of local educational affairs. Some of the duties and responsibilities of the department of public instruction have been assigned to these boards, which exercise their functions through the inspector of schools as their secretary. Their functions are confined to the administration and supervision of vernacular education within their several areas, subject always to the general control of the department, the orders of the government and the provisions of the codes.

Elsewhere functions of this nature are performed by the local bodies. In the United Provinces, however, an attempt has been made to constitute committees for smaller areas than those controlled by district boards. The scheme fits in with the system initiated on the recommendations of the Piggott committee of 1913 (see paragraph 266). Under this system the whole province is divided into circles each of which has central schools together with preparatory schools. It has now been ruled that there should be a local committee for each circle consisting of a few residents of villages, whose duties are to supervise and encourage schools within the circle by endeavouring to increase the enrolment, by insisting on regularity and punctuality of teachers and of pupils, by providing or recommending improvements, by assisting boards in fixing the fee rates, by advice as to hours of attendance and harvest holidays, by arranging for prize distributions, etc. In the Allahabad district it is stated that these committees are playing an important part in the advancement of primary education and arousing interest. Elsewhere they do not seem to have been of much value, and according to latest information they are being abolished.

There are numberless so-called managing committees, some of which are really advisory. But, as these are attached to individual institutions, it will be more convenient to notice them in the chapters dealing with different types of education.

IV.—Local bodies.

Duties of local bodies.

106. Local bodies form one of the most important agencies both of control and of direct management. They include rural boards and municipalities. A rural board (generally called a district board or a district council) exercises jurisdiction in matters of education, sanitation, roads, ferries, pounds, etc., over the area of a district. There are smaller bodies, called local or *taluq* boards, which, under the general control of the district board, exercise delegated functions over sub-divisional areas. In Assam there are no district boards, their place being entirely taken by local boards. In Burma there are no boards either district or local. Municipalities are established in cities and towns and possess a responsibility similar to that of district boards in the matter of education. Taken together these two types of bodies form the agency of local self-government.

107. The educational functions of local bodies are imposed or conceded by law and elaborated in by-laws. The Acts vary considerably in the degree to which they lay responsibility upon these bodies and the scope of the activities thus imposed.

The most categorical is the *Madras* Municipal Act, which lays it upon a municipality to make provision for the instruction in schools of all children of school going age. But even here the responsibility is expressly limited by the phrase ' so far as the funds at their disposal may admit.' .In *Bombay city*, too, it is incumbent on the Corporation to make adequate provision for maintaining, aiding and accommodating primary schools. But here again there is a conditioning clause, which makes it clear that adequacy does not involve universal application, by providing that, in the event of education becoming free or free and compulsory at the instance of government, one-third of the additional cost thereby incurred shall be paid by government. In the district municipalities of *Bombay* and in the *United Provinces* the provision for primary schools is to be reasonable; and the Act appears to interpret the phrase in the case of the latter province by laying on the municipalities the duty of expending on this object at least five per cent. of their normal income after deduction of income from special services. In *Bengal*, the *Punjab*, *Burma* and the *Central Provinces* the Acts are permissive only, allowing municipalities to spend money on schools, or at most declaring their

funds to be applicable to this object—with the addition, in the case of the last three provinces, of training and scholarships. The Acts governing district boards are still less drastic. In *Bombay*, it is the duty of the boards to make adequate provision for primary schools and for training. Boards in *Madras* shall provide for the diffusion of education by the construction and maintenance of schools, inspection and training. But in both these presidencies this duty is to be performed only so far as funds permit. The Bengal Act is peculiar in charging boards with the maintenance and management of all primary schools under public management; as a matter of fact board schools in Bengal are few and of recent growth, the system being almost wholly one of grants-in-aid. In the *United* and the *Central Provinces* the boards shall, so far as the funds at their disposal permit, provide for the establishment and maintenance of schools, inspection, training, and scholarships. It is specified that these things are under the control of boards in the *Punjab*. In *Assam*, a board may contribute towards or be charged with the establishment, maintenance and management of all primary and middle vernacular schools under public management.

It is generally stated that local bodies may perform their duties wholly or partially through grants-in-aid. In all cases the Acts permit government, in case of default, either to execute the neglected duties at the expense of the local body or to supersede it.

It occasionally happens that municipalities find it convenient to transfer the administration of their educational institutions to the district boards, while continuing to pay the expenses. This is the practice among the smaller municipalities of the United Provinces, which have no machinery for control, and those of the Jullundur division of the Punjab. The arrangement is found to make for efficiency but tends to weaken local interest.

108. The Acts do not, save in the case of Bombay city, and the boards of that presidency, of Bengal and of the United Provinces, limit the functions of local bodies to primary education. In Assam the limitation is to primary and middle vernacular education. But the chief concern of local bodies is with primary schools. In addition to maintaining schools, some local bodies give aid to privately managed schools. In Bengal and Bihar and Orissa, this is the usual manner in which they discharge their responsibilities. Elsewhere maintained and aided elementary schools exist side by side. But in Bombay, the United Provinces and the Central Provinces aid to schools in board (as apart from municipal) areas is given almost exclusively by government. In Bihar and Orissa, where the distribution of grants was only recently entrusted to municipalities, the change is said to have resulted in greater interest. In Burma, though there are no boards, considerable sums are spent in the lower districts from local cesses upon maintained and aided schools.

109. The number of institutions and pupils in schools managed by local bodies and the total expenditure on education by these bodies are shown below. Detailed figures for provinces are found in appendices V and VI. *Number and cost of institutions managed by local bodies.*

	Boards.	Municipalities.
Number of institutions . .	38,049	2,952
Number of pupils . . .	2,234,066	331,474
Total expenditure . . .	₹1,73,78,535	₹49,39,083

In addition to the institutions shown are the mass of schools (especially great in Bengal, Bihar and Orissa and Madras) which are aided by these bodies.

The general result is that local bodies manage 41,001 institutions containing 2,565,540 pupils, or 35·6 per cent. of the total number of pupils in public institutions and that their educational expenditure, including contributions from provincial funds, is ₹2,23,17,618, or 19·9 of the total expenditure on education. But a reference to paragraph 115 will show that more than half of this sum is in reality provided from provincial revenues.

110. The powers of the local bodies are defined by rules. The amount of independence they can exercise varies largely. In Bombay the actual administration of board schools rests with the department of public instruction, the boards themselves voting money, deciding on their location and, so far as rules permit, fixing the fee-rates. The appointment and control of staff, the determination and payment of salaries and the grant of leave are *Educational powers of local bodies.*

the work of the department. Municipalities in that presidency exercise far wider powers, and the question of delegating further powers to boards is before the local Government. In other provinces the boards exercise a greater measure of independence, appoint their staff, fix rates of pay, etc. Thus, in the Central Provinces, inspecting officers are instructed to confine their activities to inspection and advice and to take up only such administrative work as is expressly delegated. This paragraph and those which follow are to be read in the light of paragraph 118, from which it will be seen that a policy was announced towards the end of the quinquennium which will invest local bodies with a large measure of independence as regards both administrative and financial matters.

Objects on which expenditure may be incurred.

111. As regards the objects on which local bodies distribute their educational expenditure, the general rule is that local bodies may not spend money on secondary till they have satisfied the claims of primary education. Though no local body can be said to have fulfilled this condition, yet boards and municipalities lay out respectively 10·58 and 21·68 per cent. of their total educational expenditure upon secondary schools and, quite apart from institutions which they aid, maintain six colleges, 1,430 secondary schools and 393 special schools.

There is a certain temptation, especially among municipalities, to continue this practice. Mr. Richey indeed complains that, while most municipalities of the Punjab pay little heed to education of any kind, the fact that primary education is all that the great majority of children will receive is not realised by the class from which the councillors are drawn. The tendency in recent years has been to relieve local bodies of charges which they had undertaken or which had been imposed on them in respect of secondary education. Before the quinquennium this relief was effected on a large scale in the United Provinces, the Punjab and the North-West Frontier Province. During the quinquennium the government of Burma assumed the management of municipal Anglo-vernacular schools, and municipalities in that province have now no financial obligation towards these institutions. A rule has however been made that provided the needs of vernacular education are fully met richer towns may incur expenditure on Anglo-vernacular education in the form of contributions to the provincial educational budget. It was also decided that middle English schools in Bihar and Orissa should be withdrawn from the control of boards in order to avoid the danger of money intended for primary being diverted to secondary education. Action has been delayed because it is the intention of government to continue its subsidies in full to the boards, which will thus have more to spend on primary education, while additional funds must be found by government for the maintenance of the middle schools. In the Central Provinces the policy has been pursued of entrusting a considerable portion of secondary education to municipalities and the resolution on the report indicates that reliance must be placed upon them for expansion. Elsewhere it will probably not be possible to alter immediately a practice which has gradually grown up and doubtless appeals to some of the bodies concerned.

It is recognised, and has recently been more fully recognised, that the educational duties of local bodies lie primarily towards elementary instruction and that this object constitutes a first charge upon their funds. During the past fifteen years the percentage of expenditure by these bodies on secondary to that on all education has slightly fallen—in the case of boards from 14·08 to 10·58 and in that of municipalities from 33·03 to 21·68. Further efforts are being made to concentrate local and municipal funds on primary education, but without decreasing the total subsidies made by government. But the immediate provision of funds is not in all cases possible.

Local bodies and inspection.

112. Local bodies do not generally maintain their own inspecting staff. A portion of the regular subordinate staff used to be maintained by the boards in some provinces, notably Bengal. The arrangement was found unsatisfactory and was brought to an end, save in some of the low paid grades which are in process of abolition. Municipalities however occasionally maintain their own supervisors, whose work is intended to supplement, not to replace, that of the departmental staff. Such is the case in some of the municipalities

of Bombay, of the United Provinces (where government in 1916 gave grants to four of the municipal towns in order to enable them to make such appointments) and in Nagpur. The Director in the Central Provinces says that the appointment in this last case is a wise step, but that similar appointments under district councils would be a mistake, since his experience of a double system of inspection is not encouraging and funds required for the development of schools cannot be spared for this purpose. In the Punjab some of the municipalities maintain lady superintendents for inspecting purposes.

113. The amount to be spent by local bodies on education in various provinces is sometimes fixed by rule; but the tendency of late has been to leave the decision in this matter to the bodies themselves. The rules in force during the quinquennium are briefly given below. *Expenditure by local bodies.*

Boards in *Bombay* are required to spend not less than one-third of the revenue derived from the land-cess upon education. In the *United Provinces* it is laid down by law that the provision made by the municipalities for primary schools cannot be regarded as reasonable unless it amounts to at least five per cent. of the normal income after deduction has been made of income from special services. The minimum expenditure prescribed for boards in the *Punjab* is a sum made up of all grants made for purposes of education, the fee income and 25 per cent. of the general income of the district fund excluding the items before mentioned. It is further laid down that out of this sum the portion set apart for primary education should be not less than grants for and fees from that class of instruction and three-fifths of the portion of the annual income set aside for education generally. In the case of municipalities in that province the rule regarding general expenditure on education is similar save that 10 per cent. of the income is prescribed in place of 25 per cent. In *Burma*, where there are no boards, the maximum expenditure made by municipalities should not exceed 5 per cent. of the gross annual income; nothing is laid down regarding the minimum. In *Bihar and Orissa* the minimum expenditure for a board is the amount actually expended in 1911-12 *plus* an amount approximately equal to 10 per cent. of the grant from the Public Works cess, *plus* the total of the recurring grants given by Government since April 1st, 1912. In the *Central Provinces* board expenditure may not exceed a sum equivalent to the education cess, the fee receipts, government grants, private subscriptions and such portion of the board's income as with the approval of the commissioner has been allotted to education. The rule regarding municipalities is the same save that there is no education cess. An important piece of legislation has been carried out in Berar, whereby district councils may at their option double the education cess and impose a further cess on non-agriculturists. It is proposed similarly to legislate for the other divisions of the Central Provinces. In *Assam* the percentage spent is not ordinarily to fall short of that represented by the expenditure of the previous year and of the year 1904-05, exclusive of grants; *i.e.*, the expenditure of 1904-05 is taken as the basis and to this are added the enhancement up to the previous year and any new grants made during the year. In the *North-West Frontier Province* a board is required to spend 25 per cent. of its total income exclusive of school fees and grants which are to be expended on education in full.

No specific rules are laid down for boards or municipalities in *Madras* and *Bengal*, for boards in the *United Provinces* or for municipalities in *Bombay*, *Bihar and Orissa*, *Assam* and the *North-West Frontier Province*. In the *Madras* municipalities, however, it is laid down that 15 per cent. of the income may be regarded as a fair proportion. In *Bengal* the rule requiring a municipality to spend 3·2 per cent. of its ordinary income has been abrogated, but it is understood that this is still taken as a fairly suitable standard. Nor is there any strict rule regarding board expenditure in this presidency. Ordinarily however the income from pounds and ferries and some portion of the Public Works cess are assigned to education.

114. The percentage of educational expenditure on the total expenditure of boards throughout India is, in Madras 14·8, Bombay 43·1, Bengal 23·1, United Provinces 28·3, Punjab 27·6, Bihar and Orissa 19·1, Central Provinces and Berar 30·0, Assam 33·3, North-West Frontier Province 42·9, Coorg 26·7, Delhi 37·1, Ajmer-Merwara 9·1, and for all India 24·9.

Similarly the proportion so spent in municipalities is, in Madras 9·6, Bombay 15·9, Bengal 3·8, United Provinces 6·7, Punjab 11·0, Burma 4·4, Bihar and Orissa 4·6, Central Provinces and Berar 14·0, Assam 8·0, North-West Frontier Province 11·4, Coorg 14·3, Delhi 3·9, Bangalore 2·2, Ajmer-Merwara 4·7, Madras Corporation 4·4, Bombay Corporation 4·0, Calcutta Corporation 0·6, Rangoon Corporation 5·4, and for all India 6·8.

The large differences in the proportions are probably explicable by varieties in the methods of calculating income, etc.*

Assistance rendered from provincial resources to local bodies.

115. In connection with these questions of expenditure two important points should be noted which have enhanced the resources of local bodies.

Previous to 1913 the boards of several provinces did not receive the whole of the land cess. In Bengal for instance the cess was divided into the road cess and the public works cess and the latter was taken by the local Government, which however returned a portion in the shape of grants. In the United Provinces, the Punjab and the North-West Frontier Province considerable reductions were made from the cesses for various purposes. In 1913 the entire net proceeds of the cesses were handed over to the boards, the Government of India making assignments to the local Governments to cover the loss. By this means the income of boards in the provinces named above was enhanced by 82½ lakhs.

Secondly, Government supplemented the incomes of boards in 1905 by contributions for general purposes amounting to 25 per cent. of their then existing income and both in that year and subsequently imperial grants assisted local Governments in making special contributions to boards and municipalities for purposes of education and sanitation. Of the grants made during the viceroyalties of Lord Curzon and Lord Hardinge, a substantial portion was handed over to local bodies for the development of primary schools. The amount shown in general table IV, as expended from local funds upon education amounts to ₹1,73,78,535 and that from municipal funds to ₹49,39,083. But out of the former sum ₹99,96,410 and out of the latter ₹15,83,798 are contributed from provincial revenues, so that out of the grand total of ₹2,23,17,618 expended by local bodies no less than ₹1,15,80,208 or more than half represents money handed over to them by the local Governments. The total expenditure in each province shown separately for boards and municipalities together with the government contributions included in these sums are shown in appendix VI. The variations are striking, especially the comparative paucity of contributions made in Bengal, and are probably to be explained by differences in the conditions of boards and their ability to discharge their functions.

116. An interesting example of the method on which contributions have been allotted to boards is contained in the Punjab report. When the large imperial grants were received, it was laid down that the local Government would bear two thirds of the salaries of trained board school teachers and of grants earned by aided elementary schools and one-half of the salaries of untrained teachers, a proviso being made that no trained teacher should receive less than ₹12 a month or ₹15, if a headmaster. As the system favoured the richer districts, special doles were made to the poorer boards. When the imperial grants were thus allocated and no new grants were forthcoming, it was found that government had committed itself to the expenditure of over half a lakh which was not covered by the funds available for this object and had to be reappropriated from other heads. Hence in 1915 the system had to be changed. Boards are now required to submit proposals annually and distribution is made according to their needs by the Finance Committee, the grant for each new school required being ₹200—a liberal estimate of two-thirds of the annual cost in the Punjab.

117. It might be anticipated that the expenditure of local bodies on education would largely have increased during the twelve years, that is, from the time before the policy of imperial grants whether general or for educational purposes was instituted. The expenditure in 1904-05 was just over 95⅓ lakhs.

* These figures are taken from the district board and municipal reports for the year 1915-16. Later figures are not available.

In 1911-12, it was ₹1,35,64,264. In 1916-17, it was ₹2,23,17,618. Thus the increase during the quinquennium has been a little over 87½ lakhs and during the past 12 years 128 lakhs. When it is considered that government now contributes over 115 lakhs towards the educational expenditure of boards and that a considerable amount of this was made available during these twelve years it is clear that the additional amount which local bodies have found from their own resources for purposes of education is comparatively small.

Declaration of policy by the Government of India.

118. During the quinquennium the Government of India issued a resolution on Local Self-Government and also passed orders on the questions raised by the Royal Commission on Decentralisation. These orders, issued on the 19th September 1916, were as follows. Generally speaking the Government of India endorsed the decision of the Commission to give to local bodies a greater share in the control of such education as is entrusted to them. It accepted the principle that the activities of these bodies should in the main be confined to primary schools, though the charge of vernacular middle schools might also be undertaken in cases where their duties towards primary education were fully discharged, and that secondary institutions teaching English should be financed by government. As, however, government is at present unable to meet the additional expenditure which the adoption of this recommendation would involve and the reduction in grants for other objects might lead to misconceptions, the financial support of secondary English schools now maintained at the cost of local bodies must continue so to be maintained, though expenditure on this object should not be increased at the expense of the interests of primary education. As regards the powers of local bodies, such matters as leave, acting and travelling allowances, pensions or provident funds and maximum salaries for establishments should be governed by rules prescribed by the local Government. But the local bodies should have a free hand in the creation and filling up of appointments, punishment, dismissal, etc. They should also be able to open and close schools, although the collector should have power to order the opening of new primary schools where necessary and a local body might be required to submit proposals for the closing of a school to the collector or the director. The practice under which a certain choice is allowed in the curriculum should be emphasised. The departments of public instruction will continue to prescribe courses, the adoption of which, with or without any alteration, should be left to the local bodies. Text-books not approved by the department should not be prescribed without the sanction of the collector. But a free choice should be given from lists of approved works provided changes are not unnecessarily frequent. As regards inspection, the ordinary practice should continue as heretofore, namely, the retention of the inspecting staff in the pay and under the control of government, though a local staff might be maintained at the expense of local funds provided it merely took the place of the existing staff and was subordinated to the government inspecting agency. Finally local bodies should be given full power to pass their budgets, though the rule should generally be adopted that grants made for education are spent on that object and that the standard of expenditure on primary education previous to the receipt of such grants is not substantially reduced.

Education in presidency cities.

119. It is usual to add a few remarks regarding educational work under the Corporations in the presidency cities. The position is as follows :—

	Total expenditure on all objects.	Total expenditure on education.	Percentage of (*b*) on (*a*).
	(*a*)	(*b*)	(*c*)
	Lakhs	Lakhs	
Madras	45·4	0·99	2·2
Bombay . . .	153·9	6·3	4·1
Calcutta . . .	109·0	0·66	0·6

The Madras and Bombay Corporations maintain 21 and 195 primary schools with 2,742 and 23,987 pupils respectively. It may be assumed that other schools in Madras receive aid. In Calcutta there are 337 boys' primary schools, mainly of the proprietary type, with 17,229 pupils.

120. The contrast between Bombay and Calcutta is striking, especially in view of the statement made by Mr. Hornell, that of the expenditure in the latter city only ₹22,782 (exclusive of remissions of rates and taxes) goes on primary education,* whereas Bombay spends over 5 lakhs on this object. The question of education in Calcutta came to be regarded as so important during the quinquennium that an officer was deputed to investigate it. He reported that the condition of schools was far from satisfactory. "An ill-lighted and ill-ventilated room in a private *pucka* house, or an equally objectionable hut with a tiled roof; a number of boys huddled together, sitting, in some cases, on benches and, in some, on the floor, but all alike shouting at the top of their voices; a *guru*, uneducated and untrained, but determined to eke out a living for himself, dozing at the desk—this is the picture of an ordinary primary school." This report was laid before the Corporation. The chairman pointed out that the Bombay municipality receives an annual grant from government for liquor licenses and tobacco duty aggregating 4⅓ lakhs a year It was also pointed out that the Corporation were not in a position to undertake the primary responsibility for the provision and maintenance of schools and that it was not the intention of the law that they should do so. It was, however, admitted that schools were unsatisfactory and the Corporation declared that they would be glad to co-operate with government in improving it, the suggestion being made that loans should be raised for the construction of suitable school buildings and the amounts now spent on grants might be devoted to interest and sinking fund, the Corporation undertaking a larger expenditure for some such specific purposes and government defraying the cost of the staff and maintenance of the schools so constructed. The Presidency division inspector has since been instructed to prepare a scheme setting forth the needs of each ward in respect of school buildings.

121. The position in Bombay is as follows. The produce of liquor licenses and tobacco duty had been made over to the Corporation to help defray the police charges. When government in 1907 undertook these charges, which amounted to just over 5 lakhs, it did not resume these concessions. But in exchange the Corporation undertook certain medical, educational and other expenses which had previously devolved on government and which also amounted to just over 5 lakhs (inclusive of the total government expenditure on primary education in the city, which, apart from building grants, then amounted to ₹86,000 a year). The Corporation further undertook to make such adequate provision for primary education as might devolve upon them owing to the withdrawal of the Government expenditure, safeguards being, however, added in case of a change of policy. Accordingly the City of Bombay Municipal Act renders it incumbent on the Corporation to make adequate provision for primary education. A further section of the Act lays down that if at any time government makes primary education free or free and compulsory in the city, it shall then pay to the Corporation a grant amounting to one third of the difference between the cost thereafter annually incurred by the Corporation on primary education and the cost so incurred in the period of twelve months immediately preceding the change. It is also provided that should there be any change in the general policy of the government as regards its own liability towards the cost of primary education, the Corporation would be entitled to benefit thereby to the same extent as other municipalities. In pursuance of the obligation laid upon it by the Act, the Bombay Corporation has increased expenditure upon education from 1·7 lakh in 1907 to 5·7 lakhs in 1916-17. It may be mentioned that in 1916-17, the Corporation received from the liquor licenses about 1·44 lakh and from the tobacco octroi 3·52 lakhs.

122. In Calcutta too the contribution made by the Corporation towards the upkeep of the police was remitted in 1888, when the suburban municipalities were amalgamated with it, and the rate levied for that purpose was abolished. But a new conservancy tax with the same maximum was imposed in order that "the Corporation might not be worse off *qua* taxation than before." The promotion of primary and technical education lies at the discretion of the Corporation.

* The Report on the Municipal Administration of Calcutta, 1916-17, states that ₹64,235 was spent on primary education in that year (page 34).

V.—Private managing agencies.

123. Privately managed institutions number 111,523 and their pupils 4,402,883 or 61·1 per cent. of the total number of pupils in public institutions. Expenditure on these institutions is ₹5,07,80,150 made up of ₹1,58,07,359 from public funds, ₹1,98,70,419 from fees and ₹1,51,02,372 from other sources. Thus, the majority of institutions fall under private management. *Privately managed institutions.*

124. The policy of entrusting much of the educational activity of the country to societies and individuals dates from the despatch of 1854 and has since been steadily pursued by government. The main reason for initiating the policy was the consideration that government with its limited resources could not cope with the almost boundless exigencies of the situation. The Commission of 1882 declared the improvement and extension of private institutions to be the principal care of the department. But it found among its witnesses differences amounting to a complete conflict of opinion on this point, it admitted the unsuitability of the grant-in-aid system in its existing form to the supply of education for the masses, it dwelt on the lack of agencies and co-operation, it was unable to advise the immediate or general withdrawal of the State from the provision of high education and it agreed "that the careful supervision of the State is indispensable for higher education; and that whatever withdrawal there may be, whether soon or late, from its direct provision, there should be none whatever from its indirect but efficient control."* The Resolution of 1913 restated adherence to the policy. "It is dictated," the Resolution ran, "not by any belief in the inherent superiority of private over State management, but by preference for an established system and, above all, by the necessity of concentrating the direct energies of the State and the bulk of its available resources upon the improvement and expansion of elementary education. The policy may be summarised as the encouragement of privately managed schools under suitable bodies maintained in efficiency by government inspection, recognition and control, and by the aid of government funds." *The policy of private management and grant-in-aid.*

The amount of recurring grant-in-aid given towards the maintenance of privately managed institutions has increased in the past twenty years from ₹41,34,001 to ₹1,58,07,359. During the quinquennium the increase was ₹60,13,088. The total sum now given is made up of ₹1,07,75,504 given directly from provincial funds and ₹50,31,855 from local and municipal funds. In addition to this, large amounts are disbursed from public funds to meet the cost of buildings and other indirect expenditure connected with privately managed institutions. The number of institutions now in receipt of aid is 92,582, while that of unaided institutions is only 18,941.

125. The aided primary school has not, on the whole, been particularly successful. Board schools are more efficient and popular. The system of private management has led to a large expansion of secondary and collegiate education, and here and there has called forth local generosity. On the other hand, several of the reports point out that such schools are not always wisely located; they can be started "where and when and under whatever auspices chance may provide," sometimes in competition with each other or with government institutions; many depend solely or almost solely upon fees; and this fact, combined with the light control which external authorities bring to bear, is not always productive of happy results. *Value of privately managed institutions.*

126. On the other hand there are many excellent private institutions. Conspicuous among these are those managed by missions. In the larger provinces they number 10,461, namely, 42 colleges, 843 secondary schools, 9,259 primary schools, 75 training institutions and 242 other schools. Their total cost is ₹1,38,00,457. Out of this sum, ₹38,27,311 come from mission funds, to which must be added the honorary services of many teachers. Appendix VII gives further details. Church of England missions educate some 113,000 pupils and contribute about 7·84 lakhs; Roman Catholic missions approximately 108,000 pupils and 8·8 lakhs; Baptist missions 54,000 pupils and 3 lakhs. Scotch, American and other missions work on a large scale. *Missions*

* Report of the Indian Education Commission of 1882, pages 352, 356, 357, 436, 454, 462, 463, 464.

The Methodist Episcopalian and Welsh Calvinistic missions may be specially mentioned.

The education of girls, of aboriginal tribes and of depressed classes is the field in which missions have achieved the most conspicuous success. But they also maintain excellent colleges and secondary schools and manage popular hostels.

Societies, individuals, etc.

127. Some of the schools managed by Indian societies or endowed by liberal-minded land-holders and others also reach a high level of efficiency. Among the former class, there are a considerable number in the Bombay presidency—the institutions of the Deccan Educational Society, the Shikshana Prasarak Mandali, the Ahmednagar Education Society, the Seva Sadan and others. In this presidency some of the proprietary schools, too, are reported as doing really good work. Many of the proprietary schools throughout India, however, are in need of reform, as also are those managed by *fainéant* committees. Mr. Hornell, speaking of the managing committees of aided middle schools, says that they cannot as a rule be regarded seriously, as all authority is centred in the secretary or the president. This remark is of wide application. Further comment on the results of the policy of dependence on private effort is reserved for the chapter on secondary education.

CHAPTER V.

THE EDUCATIONAL STAFF.

The Educational services.

128. The inspectorate and the staff of government institutions are composed of government servants, who are arranged in services in the way described below.

(*i*) The Indian Educational service, which consists mainly of Europeans, is recruited by the Secretary of State. Its members fill the posts of Directors, inspectors, principals, professors, headmasters, etc. The pay is ₹500 rising by annual increments of ₹50 to ₹1,000. As to further promotion, there are the posts of Director which carry special pay, sixteen* personal allowances rising to ₹250 or ₹500, and, in cases where a man fails to obtain these advantages, allowances of ₹100 a month after 15 years' service. The period of service ordinarily required is 30 years and the pension amounts to £437-10-0, a Director of approved service receiving £525. Ladies receive special rates of pay ranging generally from ₹300 to ₹500 or ₹600 a month. The post of Director is not confined to the Indian Educational Service and, if no suitable officer is to be found in that service, may be otherwise filled. Appointments are occasionally made to other posts also, from services other than the educational.

(*ii*) The provincial services, which are composed mainly of Indians, are recruited by the local Governments. They include inspectors, assistant and joint inspectors, principals, professors, headmasters of important high schools and of some normal schools, etc. The arrangement of the services varies from province to province. In Bengal, Bihar and Orissa and Assam there is a regular graded service from ₹200 to ₹700 a month. Elsewhere the services are sometimes split up according to the kinds of duties performed. The average pay is ₹320, the highest rate being ₹418·9 in Burma and the lowest ₹230·9 in the North-West Frontier Province.†

(*iii*) The subordinate service, which is composed almost wholly of Indians and is recruited by local Governments, comprises such posts as those of deputy and sub-inspectors, lecturers in colleges, headmasters, assistant teachers, etc. Here also Bengal, Bihar and Orissa and Assam have a regular graded service from ₹50 to ₹250 a month. In other provinces various arrangements are adopted, the service being sometimes split up according to the nature of the

* This is exclusive of four allowances held by the staff of Chiefs' Colleges.

† The figures for the provinces are—Madras ₹354·5, Bombay ₹366·8, Bengal ₹312·1, United Provinces ₹338·4, Punjab ₹293·1, Burma ₹418·9, Bihar and Orissa ₹313·8, Central Provinces ₹295·3, Assam ₹249·4, North-West Frontier Province ₹230·9.

duties performed. The average pay is ₹65·1 varying from ₹53·7, in the North-West Frontier Province to ₹88, in Bengal.*

(*iv*) In some provinces are found lower subordinate services. Sanction has recently been obtained to the breaking up in some cases of these services into separate cadres according to the work performed, such as a vernacular teachers' service and so forth.

(*v*) Outside posts are generally created for officers performing special duties.

The numbers in these services, the average emoluments and the proportion of Europeans and Indians who occupy posts are shown in the following statement. The figures for different provinces are given in appendix VIII.

Service.	Number of officers.			Average monthly pay in rupees to one place of decimals.
	European or domiciled community.	Indian.	Total.	
Indian Educational service †	241	7	248	832·2
Provincial Educational service	57	450	507	319·9
Subordinate Educational service	137	8,841	8,978	65·1
Unclassified posts	228	3,707	3,935	45·9
Total .	663	13,005	13,668	78·6

129. It has already been stated that improvements in the pay of those engaged in educational work formed a feature of the quinquennium. These improvements, however, touched mainly the board teachers of primary schools and the staff of aided secondary and primary schools, and affected only to a less degree the services here described. A few minor changes were made. Headmasters of high schools recruited in England now enjoy the full pay of the Indian educational service; in the Central Provinces the collegiate branch of the provincial service was reorganised in grades from ₹150 to ₹500; and in Bengal the headmasters and headmistresses of government high and middle English and vernacular schools were granted local allowances of ₹50, ₹30 and ₹20 a month, and assistant headmasters or mistresses of high schools ₹20 a month, provided that, in the case of high school staff, the officers are members of the subordinate educational service. Other schemes of reform are a-foot, such as the transfer to the provincial service of the chief deputy inspector in each district (henceforward to be known as the district inspector) and headmasters of high schools in the case of Bengal and Bihar and Orissa. But organised improvement in the prospects of the Indian and provincial services was shelved pending the deliberations of the Royal Commission on the Public Services in India, which commenced its sittings in November 1912 and whose report appeared in 1916. *Improvements in the pay of the services.*

In view of this delay it was decided to give some temporary relief in the case of the educational services, where the necessity of improvement had so long been recognised. Accordingly at the beginning of 1913, eight special allowances of ₹150 each were bestowed on officers of the provincial services whose recognised claim for promotion to the Indian Educational service could not be conceded till a decision was reached. The cases of others, whose pay appeared incommensurate with their merits but whose age precluded their chances of benefiting by any scheme of reorganisation, were treated under general financial powers conferred on local Governments at the beginning of the quinquennium. At the end of 1914, a provision with similar ends in view

* The figures for the provinces are—Madras ₹72·4, Bombay ₹78, Bengal ₹88, United Provinces ₹55·7, Punjab ₹61·2, Bihar and Orissa ₹86·9, Central Provinces ₹84, Assam ₹70·2, North-West Frontier Province 53·7. The figure for Burma has not been returned.

† The following are not included in the Indian Educational Service figures:—Five officers of Bombay, *viz.*, the Director of Public Instruction and 4 officers on deputation; 12 vacancies, 6 in Bengal, 1 in the Punjab, 5 in Bihar and Orissa, and 2 Indians who are officiating in the Punjab in place of Europeans on deputation. It includes one officer on deputation in the Punjab from the Medical Department.

was made for the Indian Educational service, by which allowances aggregating ₹23,800 a year were distributed to certain of its members provided they fulfilled specified conditions of service.

A fairly sustained effort has also been made to improve the pay of the staff in the lower services. Thus, Mr. Mayhew reports that the average pay of teachers in government secondary schools has been raised from ₹65 to ₹85; undergraduates rise in grades from ₹40 to ₹125 and graduate teachers on a time scale from ₹60 to ₹125, while there are 40 additional posts of ₹150 to ₹250 reserved for officers of special merit.

The staff in schools managed by local bodies and private agencies.

130. Of the total of 280,738 teachers in colleges and schools, only 9,474 are in government service. Of the remaining 271,264, there are 78,977 in board employ, 13,058 in municipal and 179,229 in private employ.

Contributions to local funds and enhanced aid have served to improve the pay given to these teachers. In the resolution of 1913 the Government of India laid down ₹12 as the minimum pay of trained primary teachers. In many cases this minimum is exceeded. But the existence of a large body of untrained men reduces the average of board teachers' pay to less than this amount. One of the inspectors in Bihar and Orissa reports that in aided high schools (exclusive of mission schools) the rates of pay now range generally from ₹20 to ₹100 instead of, as formerly, from ₹12 to ₹60, and in privately managed middle schools from ₹15 to ₹50, instead of ₹6 to ₹30.

The pay received by board, municipal and private teachers in various grades of institutions throughout India is as follows.

Kind of employment.	Number of teachers.	Average monthly pay.			
		In Colleges.	In Secondary schools.	In Primary schools.	In other schools.
		₹	₹	₹	₹
Board	71,140	42·9	15·2	11·0	21·5
Municipal	11,584	143·3	37·4	15·4	32·7
Private	177,151	176·2	34·7	7·8	15·3
Total	259,875	174·1	32·6	9·2	15·9

The low pay shown for teachers in board secondary schools is due to the fact that these are largely middle vernacular schools. The total number of teachers here shown falls slightly short of the actual total. Figures for Coorg, Ajmer-Merwara and Bangalore are not included.

Pensions and provident funds.

131. Apart, however, from the actual pay received, it is important to consider the arrangements made by the controlling authorities for the prospects of their employees.

Government servants are classed in the services already specified, receive regular grade or time-scale promotion and are eligible for pension.

Board and municipal servants, too, are often in regular services and sometimes held eligible for pensions or the benefit of provident funds. In Bombay and the Central Provinces, their service is pensionable.

In the United Provinces and the North-West Frontier Province contribution to provident funds in the case of teachers on ₹10 or over is generally compulsory. In Bihar and Orissa and under most of the local bodies in Assam and also in Delhi teachers are permitted to contribute. This question is further dealt with in paragraphs 219 and 273-274.

The employees of private agencies are not necessarily eligible for any provision for old age. As a matter of fact, however, a considerable number of privately managed institutions have now started their own provident funds. These funds are established for the most part in secondary schools and a description of them will be found in paragraph 219.

The establishment of a general provident fund for teachers in non-pensionable employ has long been under consideration by the Government of India and the local Governments and a small committee met at Delhi in 1914 in order to consider the question. Some of the reports bear witness to the fact that a general fund of this nature is an urgent necessity.

The inadequacy of the conditions of educational services.

132. The inadequacy of the pay of the educational services has long been recognised. "So far as the staff of government colleges is concerned," says the Bengal Director, "those graduates of Calcutta University who, on the strength of their M. A. and M. Sc. degrees and possibly some small amount of experience are appointed early in life to a professorship in the provincial educational service have no great cause for complaint, but this service also contains certain professors who hold European academic qualifications secured in some cases at the cost of considerable struggle and hardship which have profited them little, if at all, in the matter of pay and prospects. These officers have a grievance. Then there are the men whose qualifications, had they been fortunate, might have procured them, to start with, appointments as professors in the provincial educational service. These men begin as lecturers on ₹125 in class IV of the subordinate educational service—in the past many began on ₹100 in class V of that service. They are doing practically the same work as professors, but, failing professorships in appropriate subjects becoming vacant, the only prospect that they have is to climb slowly and laboriously up the subordinate educational service. In this service the lecturer has to compete with inspecting officers, school teachers and others, so that, even if he does work of real distinction in his subject, it is difficult, if not impossible, to give him exceptional promotion." The same report and that from Bihar and Orissa lay stress upon the still greater disabilities of inspecting officers and school teachers, especially those who are included in the lower subordinate service, where the initial pay is ₹15. The defects in all these three services are the grading, which consigns a disproportionately large number of posts to the lower classes, and the lack of correspondence between the rank held by an officer and the pay he receives. One hears of promising officers promoted to posts of responsibility, finding themselves on lower pay than their own subordinates. The system of allowances for certain officers in Bengal is designed partially to remedy this defect.

But the out-look for those in private employ is still worse. A privately managed school may have to offer larger initial pay than a government or a board school. But there is not the same fixity of tenure or certainty of some promotion, however, slow. There is no pension attached and the system of provident funds, though growing, has as yet been introduced only very partially. It is not surprising that many teachers put much of their energy into study for the legal profession and take an early opportunity of abandoning a career which offers little inducement in the way of prospects.

Notwithstanding considerable improvements in pay, the primary teacher may still find himself on a pittance which would hardly satisfy a labourer.

Large expenditure will be necessary before the conditions of the teaching profession are rendered such as will attract the right type of man. If there has been some improvement in pay, there has also, as the Madras report says, been a rise in prices. Nor will enhanced pay alone serve to establish a satisfactory and contented body of teachers in privately managed schools. Greater security of tenure, clear agreements as to terms, notice of termination of service, etc., and some general provision for old age are equally necessary reforms.

The recommendations of the Public Services Commission.

133. The Royal Commission on the Public Services in India held its sittings during the quinquennium. Its proposals touching the educational services were aimed mainly at removing the bar which has hitherto prevented the entry of Indians in any but very small numbers into the Indian Educational Service. This involves the abandonment of the present distinction between the Indian and the provincial services and the creation of a single service. The Commission proposed that this new service should be divided into two classes according to the nature of the work to be performed. Class I would include those who perform the superior work of supervision and control and

would comprise approximately 264 posts—*i.e.*, the posts included in the Indian Educational Service (about 199 at that time) with an addition equivalent to one-third. Recruitment for three-quarters of these posts should be in Europe and for the remaining quarter in India. In the case of newly appointed posts, the recruitment would be equally divided between Europe and India. Class II would contain those officers who are engaged on ordinary teaching or inspection. It would be generally commensurate with the present provincial service but should be increased up to the requirements of the work to be done. Recruitment would be wholly in India. The appointment of twenty professorships for the higher branches of study was recommended.

It was also the aim of the Commission to improve the prospects of the service. They proposed that the pay of an officer of class I, if he were recruited in England, should commence on ₹550 and rise to ₹1,250, if he were recruited in India, on ₹350 rising to ₹1,250. Two selection grades, together equal to 20 per cent. of the total of posts, were proposed, bringing the pay of selected officers (wherever recruited) up to ₹1,500 and ₹1,750. In class II an officer would begin on ₹250 and rise by a time-scale to ₹500, with the hope of entering a selection grade up to ₹700. The result would be an average pay in class I amounting to ₹1,043 for officers recruited in England, being an increase of 7·5 per cent. on the then average of ₹970½, and an average pay amounting to ₹948 for officers recruited in India; in class II the average would be ₹439, being an increase of 25·1 per cent. on the then average of ₹351.*

The Commission made many other proposals regarding the grouping of officers into an administrative, a college and a special branch, methods of recruitment, length of service, pensions, the terms of lady officers, etc.

No orders have yet been passed on these recommendations. But the Government of India addressed local Governments after the close of the quinquennium, inviting their views on certain points and indicating a readiness to consider a larger measure of Indian recruitment.

The recommendations of the Commission relate only to the highest services —the Indian and the provincial. There remain the subordinate, the lower subordinate and the other services and unclassified posts, which contain the great majority of officers. There are also the teachers under local bodies and the enormous host of teachers in private employ. No more important problem confronts the educational administration than the provision of adequate conditions and prospects for the inspecting staff and the 280,000 teachers, of whom the highest services (numbering less than 1,000) account only for a minute fraction. On the solution of this problem depends the solution of many of the most pressing difficulties. Something has been done, but much more remains to be done.

* In Burma the proposed average was 500¾, being an increase of 11 per cent. on the then average of ₹450¼. The pay, as calculated by the Commission, was generally higher than as shown in the present reports.

CHAPTER VI.

UNIVERSITIES.

I.—Organisation.

134. Until the close of the quinquennium there were five universities in India—those of Calcutta, Bombay, Madras, the Punjab and Allahabad. These were founded between the years 1857 and 1887 and are mainly of the affiliating type. During the quinquennium plans were laid for the creation of new universities, some of which, at the time of writing, have already come into being. The present chapter therefore falls into two parts—a description of the progress made in the universities actually in existence during the period and an account of the formation of new institutions. *Kinds of universities.*

135. The older universities possess similar constitutions save for slight variations in the size and composition of the senates. The main features are a Chancellor, who is the head of the local administration; a Vice-Chancellor nominated by government; a senate consisting partly of *ex officio* fellows, partly of ordinary fellows to the number of 100 in the three senior, 75 in the two junior universities, nominated by the Chancellor save that at the senior universities 20 are elected, half by the faculties, half by the registered graduates, at Lahore 15 by the registered graduates, at Allahabad 15 by the senate or the registered graduates or both; faculties and boards of studies; and finally a syndicate of not more than 17 members (at Allahabad 18), of whom ordinarily two are *ex officio* and the remainder elected by the senate, the faculties or both. The Viceroy is the Chancellor of the University of Calcutta, and the Government of India stands towards that university in the position which, in the case of each of the other universities, is occupied by the local Government at whose headquarters it is situated. The senate is the governing body, legislates (subject to government approval) for the university and considers all questions of importance. It also possesses the ultimate power in the conferment of degrees and forms the faculties from among its own members. The syndicate is of the nature of an executive committee, preparing questions for discussion in the senate and also possessing separate powers of its own, though its actions in exercise of these powers are subject to control and revision by the senate. Again certain powers are retained by government—the act of affiliation and disaffiliation of colleges, the sanction of new or modified regulations, etc. *Constitution.*

136. The characteristics of this arrangement are as follows :—The main powers (subject in some important respects to government but independently wielded as regards academic matters) are concentrated in the hands of a senate, which is largely a lay body, since the law does not require that more than two-fifths of its ordinary members be engaged in the profession of teaching. There is no independent academic body; for the authorities to which certain of the administrative and academic functions are delegated are created by the senate, mainly composed of members of the senate and liable to see their decisions revised by the senate. The faculties for instance are composed of members of the senate, each of whom is assigned to one or more of these bodies, though specialists not connected with the university may be co-opted. Often they are large bodies; at Calcutta, the faculty of arts consists of 66 members, that of science of 27, that of law of 23, that of medicine of 16 and that of engineering of 9. Half the members of the syndicate, again, may be laymen. At the same time the Chancellor and government exercise powers through nomination and the retention of certain sanctions. One of the characteristics of the new university at Benares is the distinction between administrative and academic functions, for the latter of which a separate body has been created with independent powers and capable of framing its own regulations. It was the intention to make a rather similar arrangement at

Patna, though one and the same body would deal with administrative affairs subject to the senate and with academic affairs independently. But, owing to the demand for popular control over the various activities of the university, academic and administrative functions will there be exercised by a syndicate containing a strong lay minority and will be liable to revision on appeal to the senate as described in paragraph 161.

Changes in constitution.

137. The most important changes in constitution which have taken place during the quinquennium, apart from the ideas embodied in the Acts incorporating the new universities, have been the substitution of Members of the Executive Council of Bengal for members of the Government of India (the Education Member in the latter government being retained) as *ex officio* fellows of the Calcutta senate and an alteration in the composition of the Madras syndicate whereby the elected members, previously numbering ten and chosen by the senate, have been raised to twelve of whom five are elected by the faculties and seven by the senate. Certain alterations in the method of forming the syndicate at Bombay have been proposed by that university and await consideration by the local Government. The Government of India have had the whole question of the composition and functions of the senates under consideration.

Functions.

138. The universities recognise schools for purposes of presenting pupils at the matriculation, save in Madras, where this power is exercised in British territory by the Director and in Native States by the Durbars. Schools within the territorial jurisdiction of the University of Allahabad apply in the first instance through the department, which also makes the initial, though not necessarily subsequent, enquiries. Elsewhere school managers apply direct to the university, which, though it ordinarily accepts the report of the government inspector, may utilise some investigating agency of its own. The Bombay report states that the university sometimes grants recognition to schools which the department had declined to recognise.

As regards the conditions laid down for recognition, a resolution of the syndicate of the University of Calcutta in 1908 detailed those which are prescribed by that university. Among other things it is laid down that the staff should contain not less than two graduates and two teachers who have passed the intermediate. The minimum scale of salaries for *mofussil* schools was fixed at ₹50 a month for the headmaster, ₹40 for the second master and ₹25 for each of the other four masters. A slightly higher rate was prescribed for headmasters and second masters in schools in Calcutta. The accommodation required is 8 square feet for each pupil, provision on this scale being made for 80 per cent. of the boys on the roll, which is taken to represent the average attendance. It is laid down that in the case of new buildings 10 square feet should be insisted upon.

The universities also conduct their own matriculation examinations, though they also accept the school leaving certificate (save in Bombay) and other equivalent examinations as a passport to their courses.

The affiliation and disaffiliation of colleges is ultimately the act of government. Government, however, is mainly guided by the opinion of the syndicate and the senate through whom such application must first come, although, whatever the views expressed by those bodies, the application must go forward and the ultimate authority is not bound by those views. Cases of disaffiliation are very rare.

In the University of Calcutta it has been laid down that affiliation up to the B. A. pass standard in any subject is conditional on the presence in the college of two qualified lecturers in that subject. For affiliation to the honours standard the appointment of a third eminently qualified lecturer is as a rule demanded. For physics and chemistry three lecturers are demanded in each subject, one of whom in each set should possess eminent qualifications. Such a staff would justify the inclusion of the honours courses. Conditions are also laid down regarding the equipment of laboratories. No definite rule, however, appears to have been laid down regulating the proportion of students to professors.

Universities are required to inspect their affiliated colleges—Calcutta and the Punjab once a year, Bombay once in three, Allahabad once in five years and Madras at no specified interval. Calcutta maintains a whole-time inspector. Elsewhere this work is done by committees.

The chief work of the universities consists in the prescription of courses and the conduct of examinations. Save that changes in regulations require government sanction, the universities exercise full power in these respects and can themselves settle details of courses, standards to be attained, etc., through their faculties, boards of studies and examiners.

Since 1904, the universities have possessed the power of appointing teachers and imparting instruction. Indeed, the Act makes the latter function incumbent on them. Paragraphs 150—155 show how far they have carried out this duty.

II.—Institutions and Students.

139. The number of colleges affiliated to the five universities is different from that shown in the general tables, because on the one hand their jurisdiction includes Native States and on the other some of the colleges entered in the tables are not affiliated to any university. A list of the colleges is given in supplemental table 33. The numbers are as follows. *Colleges and students.*

	Colleges in British territory.	Colleges in Native States.	Total.
Calcutta	57	1	58
Bombay	13	4	17
Madras	41	12	53
Punjab	18	5	23
Allahabad	27	6	33
Total	156	28	184

The number of students is 28,418 in colleges affiliated to Calcutta, 8,001 under Bombay, 8,522 under Madras, 6,583 under the Punjab, and 7,807 under Allahabad.

140. The output of graduates during the quinquennium was as follows. *Output of degree-holders.*

	Arts.	Science.	Law.	Medicine.	Agriculture	Engineering.	Teaching.	Commerce.	Total.
Calcutta	7,564	1,408	1,981	360	..	62	280	..	11,655
Bombay	2,607	154	791	248	105	181	..	26	4,112
Madras	3,644	..	1,274	76	..	41	..	..	5,035
Punjab	1,887	156	280	102	..	..	259	..	2,684
Allahabad	2,190	386	1,326	32	..	..	..	..	3,934
Total	17,892	2,104	5,652	818	105	284	539	26	27,420

In addition to these degrees, licentiates are granted in certain subjects. Calcutta, Madras and Allahabad give licentiates in teaching; Bombay

produced 250 licentiates in medicine and surgery, Madras 200 and the Punjab 7; Bombay also produced 20 licentiates in civil engineering.

The degrees in law and teaching are what are sometimes called post-graduate degrees, *i.e.*, it is necessary to take a degree in arts or science before entering upon the course. The licentiate in teaching too of the universities of Madras and Allahabad is open only to graduates.

The output of Masters in various subjects during the quinquennium was as follows.

	Arts.	Science.	Law.	Medicine.	Total.
Calcutta	1,482	328	5	1	1,816
Bombay	353	5	10	2	370
Madras	266	..	22	..	288
Punjab	219	50	..	1	270
Allahabad	283	74	1	..	358
Total	2,603	457	38	4	3,102

The university reports include figures showing the creed and race of those who have passed the various examinations. The proportions can be judged from the table in paragraph 175, which gives this information for British provinces.

Recognised high schools.

141. The number of high schools recognised by the University of Calcutta has risen from 625 to 789, of which 626 are situated in Bengal itself. The number of pupils in these recognised schools is 227,225. This is the largest number recognised by any Indian university. There are 212 schools recognised by the University of Bombay, 153 by that of the Punjab and 234 by that of Allahabad. Only 40 schools present candidates at the matriculation of the University of Madras, as most pupils in that presidency and the neighbouring Native States take the school leaving certificate.

III.—Expenditure.

Imperial grants.

142. In 1905, the Government of India had made grants to the universities and to local Governments—the former to enable those bodies to carry out the administrative functions laid upon them by the Act of 1904, the latter to assist privately managed colleges to fulfil the new conditions required. At the end of the previous quinquennium the annual amounts of these grants to universities were as follows—Calcutta ₹50,000, Bombay ₹10,000, Madras ₹25,000, Punjab ₹10,000, Allahabad ₹40,000.

In 1912 and onwards the Government of India again gave grants—this time to facilitate higher teaching and research by the universities. The sums were as follows—*non-recurring*, Calcutta 22 lakhs, Bombay 5 lakhs, Madras 7 lakhs, Punjab 4 lakhs, Allahabad 5 lakhs; *recurring*, Calcutta ₹65,000, Bombay ₹45,000, Madras ₹65,000, Punjab ₹35,000 and Allahabad ₹45,000.

In addition to these grants the Government of India had given certain special grants—₹10,000 a year for the Minto Chair of Economics at Calcutta in 1910, afterwards raised in 1913 to ₹13,000; ₹12,000 for a Chair of Economics and Sociology at Bombay, in 1915-16, which has not yet been utilised; and ₹12,000 for three years for a chair of Post-Vedic Culture at Allahabad, in 1914-15.

The general result is that the Government of India have continued or made the following grants during the quinquennium :—

University.	Recurring grants.				Non-recurring grants, 1912-1917.
	Grants of 1905 as finally revised.	Grants of 1912.	Special grants.	Total.	
	R	R	R	R	R
Calcutta	50,000	65,000	13,000	1,28,000	22,00,000
Bombay	10,000	45,000	12,000	67,000	5,00,000
Madras	25,000	65,000	..	90,000	7,00,000
Punjab	10,000	35,000	..	45,000	4,00,000
Allahabad	40,000	45,000	12,000	97,000	5,00,000
Total .	1,35,000	2,55,000	37,000	4,27,000	43,00,000

The special grant of ₹12,000 to the University of Bombay is not shown in the statement sent in by that body, as it has not yet been made over to it. The special grant of Rs. 12,000 to the University of Allahabad has now ceased. The Government of Madras gave the university ₹20,000 on four occasions during the quinquennium for inspection and travelling expenses. The Government of the Punjab gives ₹21,500 a year to the local university.

In addition to these grants, large sums were allocated for the new universities regarding which proposals are pending. These have not yet been fully utilised. The Government of India also gives one lakh a year to the new Benares Hindu University.

143. In 1911-12, the income of the five universities was ₹20,49,301, their expenditure ₹14,16,734 and the balance ₹6,32,567. In 1916-17 the figures were as follows. *Income and expenditure in 1916-17.*

	Calcutta.	Bombay.	Madras.	Punjab.	Allahabad.	Total.
Income.	R	R	R	R	R	R
Governmment grants . .	3,88,385	55,000	1,03,000	87,850	99,400	7,33,635
Endowments	1,75,118	51,174	10,626	3,230	5,081	2,45,229
Fees	10,27,531	2,25,654	2,87,930	2,72,908	1,84,615	19,98,638
Other sources	2,96,399	64,377	1,10,715	30,761	27,918	5,30,170
Total .	18,87,433	3,96,205	5,12,271	3,94,749	3,17,014	35,07,672
Expenditure.						
Administration and inspection. .	2,53,239	71,286	1,30,483	96,055	76,879	6,27,942
Examinations . . .	2,77,607	1,36,379	1,90,798	1,40,836	1,17,176	8,92,796
Teaching	4,45,440	14,800	66,542	92,891	52,810	6,72,483
Scholarships and prizes . .	20,338	33,437	7,200	23,695	5,576	90,246
Other objects	..	10,000	..	24,407	15,072	49,479
Total .	9,96,624	2,65,902	3,95,023	3,77,884	2,97,513	23,32,946

In general table IV the expenditure is shown as ₹25,51,925. The difference is doubtless due to the methods used in making up the accounts.

Income and expenditure during the quinquennium.

144. The income and expenditure during the quinquennium were as follows.

—	Income.	Expenditure.
	R	R
Calcutta	82,51,340	53,27,716
Bombay	23,32,120	13,90,156
Madras	28,79,093	15,55,605
Punjab	20,61,577	19,80,810
Allahabad	20,92,674	18,39,516
TOTAL .	1,76,16,804	1,20,93,838

To these incomes government grants contributed in the case of Calcutta ₹25,32,161, in that of Bombay ₹7,75,000, in that of Madras ₹12,02,500, in that of the Punjab ₹8,47,530, and in that of Allahabad ₹9,31,000.

Change in the character of university finance.

145. The provisions of the Act of 1904, which laid new responsibilities upon universities as regards both their control of affiliated colleges and their own teaching functions, the allotment of imperial grants and (in the case of Calcutta) the receipt of two endowments of considerable value have combined to transform the character of university finance. Previously the universities had mainly subsisted upon the fees charged for examination, and this income was spent chiefly upon the conduct of these examinations, the amount saved going to swell the balances. Other sources of income are now available; administration, inspection and teaching claim a more lavish scale of outlay; expenditure has largely increased; and, while the figures still display large savings, there may at any moment be large calls for new expenditure.

IV.—General progress.

Faculties.

146. At Bombay the number of faculties remains the same, but a new faculty of science has been created which absorbs the old faculty of engineering. There was no change at Madras, but, before the end of the quinquennium, the senate had resolved to establish a faculty of science. Elsewhere there was no change.

The faculties now stand as follows.

Calcutta.—Arts, science, law, medicine and engineering.

Bombay.—Arts (including commerce), science (including engineering and agriculture), law and medicine.

Madras.—Arts and science (one faculty), law, medicine and engineering.

Punjab.—Arts, science, law, medicine and oriental studies.

Allahabad.—Arts, science, law, medicine and commerce.

Patna.—Arts, science, law and education.

Benares.—Oriental learning, Theology, arts, science (pure and applied) and law. Other faculties (such as technology, commerce, medicine and surgery and agriculture) may subsequently be added.

Under the faculty of arts provision is made in all universities save Bombay for the training of teachers and for diplomas or degrees of teaching. At the Patna University there is a separate faculty of education.

Courses and degrees.

147. The principal changes which have taken place in the courses and examinations are as follows.

At *Calcutta* certain changes were made in matriculation subjects for the convenience of hill tribes of Assam; and Garo and Lushai (as well as Marathi, Sinhalese and Kanarese) were included as languages from which translation into English might be offered at that examination. Matriculates who take Persian were also exempted from showing the elementary knowledge of Arabic which was previously required of them

and which is still required at higher examinations. Syriac has been added as a subject in the Arts examinations. Changes were made in the rules regarding the appearance of candidates at the medical examinations and in the regulations governing engineering courses.

At *Bombay* the number of examinations leading to the degree of agriculture has been reduced from three to two. A degree of Master of Agriculture has been instituted. Other changes have been made. The prolongation of the period of study in engineering to four years so as to render the course more practical has been proposed but not carried out, and the previous examination has been abolished, each college now holding a First Year Arts Examination, success in which entitles the candidate to proceed to higher arts studies or to professional courses. The right of appearing at the Preliminary Science Examination (medical) has been accorded to students of other colleges as well as the Grant Medical College.

New regulations have been introduced at *Madras*. The study of languages other than English is now optional instead of compulsory. The course in law was extended to three years; but after twelve months the two-year course was re-instituted. The course for the L.M.S. degree was extended from three to four years and is now identical with the M.B. and B.S. course; the same papers are used for examination but with different percentages of marks. The engineering course was entirely revised and extended from three to four years, so as to comprise practical work. But the most striking change was in the arrangements for the honours degree and M.A. in the faculty of arts (including science). The honours degee course is now of three years and comprises English with one of nine alternative subjects. Successful candidates proceed without examination to the M.A. honours degree after the expiry of two years. But it is proposed to institute a M.A. pass degree open to those who do not take honours at the B.A.

The principal alteration in the *Punjab* University is the transfer of mathematics from a compulsory to an optional subject at the intermediate in arts. Candidates for the B.Sc. no longer read English poetry. The institution of a separate honours course for the B.A. is contemplated.

At *Allahabad* the B.A. and B.Sc. courses have been changed. A student in the former has now to take English and any two out of a list of optionals. A B.Sc. candidate takes a test in general English and one of two groups of three subjects each, both of which include chemistry.

The organisation of courses is shown in tabular form in appendix X.

Compartmental examinations.

148. In the last review it was observed that there was a tendency towards compartmental examinations. It takes two forms—the passing of an examination in instalments and the re-examination of candidates who have failed in those subjects only in which they did not secure the minimum marks. During the quinquennium the intermediate at Madras was divided into two parts and a candidate who in the same year passes in one but fails in the other need not reappear in the part in which he was successful. In the B. A. honours too at Madras the examination in English is taken a year after the intermediate, while the final examination in one of the alternative courses is taken three years after the intermediate. The college test which has replaced the previous examination at Bombay represents a similar arrangement. In all universities examination by instalments is common in vocational courses. The Punjab University already had re-examination in a single subject for those who fail in the degree test and has now introduced the same rule for the bachelorship of teaching. Madras has introduced it for medical examinations.

College attendance.

149. There has also been a movement towards dispensing with attendance at college on the part of those who have failed. This condition is no longer required at Madras; and in the Punjab University the conditions have been relaxed under which ex-students are admitted as private candidates.

University teaching.

150. Originally the Indian universities were not teaching bodies. The Act of 1904 specified the provision of instruction as one of their duties and gave them the power of appointing professors and lecturers, of managing endowments and of maintaining institutions. While therefore the great bulk of the teaching is still conducted in affiliated colleges, a certain amount of higher instruction is now concentrated under university management. The activities of universities in this respect, assisted by the imperial grants, have mainly taken the form of the maintenance of colleges for ordinary instruction, the partial substitution of university for college teaching in the mastership courses, lectures of general interest and research.

(*a*) *University colleges.*

151. The University of Calcutta maintains a large law college, on which ₹30,000 of the imperial grant is annually expended. Its College of Science, founded out of the gifts of fourteen and ten lakhs made respectively by Sir Tarak Nath Palit and Sir Rash Bihari Ghosh, is intended for post-graduate and research work. A department of experimental psychology has been opened. The University of the Punjab has a law college and an Oriental College. The latter has oriental titles classes and also provides M. A. and B. A. honours teaching. The University of Allahabad maintains its own law college.

(*b*) *M. A. and M.Sc. teaching.*

152. While elsewhere the universities supplement and assist the teaching of the mastership courses which are conducted in colleges, the University of Calcutta has instituted its own elaborate system of instruction for this grade. "The position at the beginning of the academic session 1916-17," says Mr. Hornell, "was that there were 326 M. A. and M. Sc. students in the Presidency College, 23 in the Scottish Churches College and 1,258 in the university classes. The university classes were under no system of real organisation or control, while as regards the staffs of the affiliated colleges, only those teachers who were employed in the colleges in the actual teaching of M. A. or M. Sc. classes had any share whatever in or influence over post-graduate work." In 1916 a committee was appointed by the Government of India to examine the question. The results of its deliberations have since been formulated in regulations. The chief features of the new scheme are the creation of two boards to supervise the teaching of mastership courses in arts and in science, the abolition of the arrangements for conducting these courses in affiliated colleges in Calcutta (though not in the *mofussil*, where colleges are affiliated to this standard) and the raising of the fees for appearance at the matriculation, intermediate and B. A. examinations with a view to meeting the cost of the university teaching of the mastership courses. The number of university students taking these courses has risen from 375 to 1,172 during the quinquennium and the staff employed in teaching them from 59 to 120.

The University of Bombay offers M. A. lectures in history, economics, Sanskrit, Persian and philosophy. At Lahore a university class has been opened for biology, the principal and one of the professors of the Government College being designated university professor and lecturer. The Director reports success where inter-collegiate M. A. lectures have been started.

(*c*) *Lectures of general interest.*

153. Scholars employed for the teaching of the higher courses and for research have delivered general lectures also, sometimes to popular audiences, sometimes to teachers of the subjects treated. For this purpose, cold-weather appointments have been made and professors brought out by one university have been utilised by others. Thus Professors A. Smithells, F.R.S., and Ramsay Muir, of the Universities of Leeds and Liverpool, were employed by the University of the Punjab to give lectures to senior students and to popular audiences and also to confer with teachers of the subjects they represent. Their services were similarly utilised by the University of Bombay, at which centre Professor P. Geddes, F.R.S., also gave lectures. Dr. J. H. Moulton of Manchester also held a course of lectures on Aryan antiquities at Bombay and courses were arranged there and at Madras by Mr. Daniel Jones, lecturer in phonetics at University College, London, Mr. E. H. Neville, fellow of Trinity College, Cambridge, and Mr. L. F. Rushbrook Williams, fellow of All Souls and University Professor at Allahabad. At Calcutta a number of readers were appointed for the delivery of special courses of lectures—Drs. A. R. Forsyth and H. Oldenberg, Messrs. S. Yamakami, G. F. Shirras and J. N. Das Gupta, Rai Sahib Dinesh Chandra Sen, Professor Hermann Jacobi, Mr. S. R. Bhandarkar and Professors Paul Vinogradoff and Sylvain Levi. Arrangements were made for lectures by members of the British Association returning from Australia but owing to the outbreak of the war only Professor Henry E. Armstrong, F.R.S., was able to carry out the plan. 'Extension lectures' were instituted, mainly intended for advanced students but also open to the public, and an endeavour was made to have lectures delivered at *mofussil* colleges at the time of their inspection.

(*d*) *Research.*

154. Research has been carried on at Madras in philology and Indian history. The University College of Science in Calcutta, various chairs and

fellowships, such as the Ramtanu Research fellowship in the history of the Bengali language and literature, assist in the work of research. Professors of economics exist at Calcutta, Madras and Allahabad and a similar post is contemplated at Bombay. A considerable amount of research is reported from the universities of Bombay, the Punjab and Allahabad by professors and by students in receipt of research scholarships. The work of Sir J. C. Bose and Dr. P. C. Ray, both formerly professors at the Presidency College, Calcutta, is well known. The University of Madras awarded a scholarship at Cambridge to Mr. S. Ramanujam who has proved himself a remarkable mathematician and has been made a Fellow of the Royal Society.

155. Such are the chief objects on which grants have been expended and for which professors have been appointed. But this description is by no means exhaustive and the duties of a single professor may comprise the teaching of the higher degree courses, general lectures and research. A better idea of the activities of universities in this direction can be gathered from a list of the professors employed. At *Calcutta* there are three chairs maintained by the Government of India—the Minto professorship of economics (₹13,000 a year) held by Messrs. Manohar Lal and C. J. Hamilton, the George V professorship of mental and moral science (₹12,000 a year) held by Dr. Brajendra Nath Sil and the Hardinge professorship of higher mathematics held by Dr. W. H. Young, F.R.S., and Dr. C. E. Cullis. The university maintains from its general funds a Carmichael professorship of ancient Indian history and culture (₹12,000 a year) held by the late Dr. G. Thibaut and Mr. D. R. Bhandarkar, a professorship of comparative philology held by Drs. Otto Strauss and I. J. S. Taraporewala and two university professorships of English held by Dr. H. Stephen and Mr. R. Knox. Chairs endowed by private munificience are the Tagore law professorship, to which an incumbent is annually elected by the senate; the Palit professorships of chemistry and physics (under the benefaction of Sir T. N. Palit), to which Dr. P. C. Ray and Mr. C. V. Raman have been appointed; and the Ghosh professorships of applied mathematics, physics, chemistry and botany (under the benefaction of Sir R. B. Ghosh), to which Dr. Ganesh Prasad, Mr. D. M. Bose, Mr. P. C. Mitter and Mr. S. P. Agharkar have been appointed. Messrs. Bose and Agharkar had been sent to Germany for training and are detained there. It is required under the deeds that incumbents of the Palit and Ghosh chairs be Indians. There are numerous fellowships and scholarships founded under these two endowments and under others such as the long-established Premchand Roychand research studentships and the Guru Prasanna Ghosh scholarship. The university also maintains a number of assistant professors, readers, lecturers and assistant lecturers. At *Madras* Dr. Mark Collins was appointed to the chair of Sanskrit and comparative philology; M. R. Ry. Rao Saheb S. Krishnaswami Aiyangar, Avl., to the chair of Indian history and archæology; and Dr. Gilbert Slater, Principal of Ruskin College, Oxford, to the chair of Indian economics. A chair of Dravidian philology also was established, but, as none was found competent to fill it, five readers were appointed. It has been decided not to reappoint them after their first three years' work. At *Bombay* a large number of local scholars have been appointed as lecturers from time to time. The University of the *Punjab* has pursued the policy of bringing out European scholars for short periods. Professor A. Smithells, F.R.S., of Sheffield, for chemistry, Professor Ramsay Muir of Liverpool for history, Mr. Fournier d'Albe of Birmingham for physics, Professor J. A. Todd of Nottingham for economics, Professor D. S. Margoliouth of Oxford for oriental history and Mr. J. H. Gracey, F.R.S., of Cambridge, for mathematics. Lecturers have also been appointed. At *Allahabad* three chairs have been created, the holders of which devote themselves to the training of advanced students in methods of research work. The chair of post-Vedic studies was supported by a grant of ₹12,000 for three years from the Government of India. It was held by Dr. A. Venis. With the cessation of the grant, the chair will be abolished. Mr. H. Stanley Jevons and Mr. L. F. Rushbrook Williams, fellow of All Souls, hold the chairs of economics and modern Indian history. Readers and research assistants have been appointed in connection with these professorships.

Creation of chairs and employment of professors, etc.

Buildings.

156. The imperial grants have also enabled the universities to carry through large building programmes.

The University of *Calcutta* has purchased a valuable site known as the fish-market adjoining the university buildings. For this they obtained a grant of 8 lakhs from the Government of India, out of which it was found possible to save a portion. The Hardinge hostel for the accommodation of 174 students of the University Law College was erected partly with the assistance of a grant of 3 lakhs from the Government of India. The Government of India also gave 10 lakhs to the university for the erection of hostels for undergraduates studying in affiliated colleges in Calcutta, and six hostels have already been built. Following the suggestions of Sir Alfred Hopkinson, a scheme has been prepared for the enlargement of the *Bombay* University buildings by the addition of post-graduate class rooms and offices at a cost of over 5 lakhs. An elaborate scheme has been framed for equipping the University of *Madras* with offices, lecture rooms and a building for its own library and for the oriental manuscripts library which has been committed to its charge. For this purpose 5 lakhs have been appropriated from the imperial grants and the local Government have contributed a further sum of ₹1,24,000 as well as land. But owing to the war the scheme is in abeyance. An imperial grant of 4 lakhs has enabled the University of the *Punjab* to acquire lands and buildings adjoining the university hall for the accommodation of the Law and Oriental Colleges. The fine university library and the observatory have been completed. The University of *Allahabad* has completed its new Senate House, Law College, university library and law hostels at a cost of over 14 lakhs, to which government contributed over 8¼ lakhs.

V.—The new universities.

The reforms of 1904.

157. An important land mark in the recent history of Indian universities consisted in the reforms of 1902-04. Though some of the principal recommendations of the Indian Universities Commission of 1902 were not accepted, the Act of 1904 embodied useful legislation for the reform of the governing bodies and for the exercise of proper university control over affiliated colleges. It also placed upon universities, as distinct from their colleges, the duty of imparting instruction. "The acrimonious controversy raised by the findings of the University Commission," writes the Bombay Director, "is a thing of the past and the true interests of the university are now beginning to be recognised by all. Owing to the reduction in its size, the increase of the educational element among its members and the limitation of their period of office, the senate has now become a more practical body; greater interest in its working has been aroused; and questions of higher education are now more generally considered on their own merits." At the same time the legislation of 1904 perpetuated the idea of the university which primarily affiliates and examines and whose teaching duties are of secondary importance. This type of university has proved useful in India. But it has its defects, and those defects are increased with the growth of institutions. When the jurisdiction of a single university extends over four provinces, 488,000 square miles and nearly 104 millions of people, embraces 58 colleges and 789 recognised high schools and examines in a year 34,538 candidates, the difficulties of the situation became apparent.* The burden of responsibility is too great for a single central body, the regulation of admission is made dependent on unwieldy external examinations, the attainments of students in the lower classes are consequently unequal to the strain of university studies, the standard is lowered, inequality in the equipment of colleges and variation in the examination results become inevitable and mechanical processes come to be substituted for a living organism.

The policy of 1913.

158. The resolution of 1913 recognised these facts. "At present," it said, "there are only five Indian Universities for 185 arts and professional colleges in British India, besides several institutions in Native States. The day is probably far distant when India will be able to dispense altogether

* The figures refer to the University of Calcutta during the last year of the quinquennium—*i.e.*, before the Patna University came into being.

with the affiliating university. But it is necessary to restrict the area over which the affiliating universities have control by securing in the first instance a separate university for each of the leading provinces in India and secondly to create new local teaching and residential universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency."

159 Partly in pursuance of this definite policy, partly in order to meet the developments of the situation, the following universities came into being during or immediately after the quinquennium. The Benares Hindu University and the Patna University, incorporated by legislation in 1915 and 1917, commenced operations in October 1917. The university of Mysore, incorporated by the legislature of that State, opened on the 1st July 1917. The Indian University for Women, a private institution, was founded in 1917. Other schemes which have progressed but not yet matured are the Dacca, Rangoon and Nagpur Universities. *New Universities.*

160. The Bill for establishing the Benares Hindu University was passed in the Imperial Legislative Council in September 1915. The notification declaring the Central Hindu College to be a college of the university took effect on 1st October 1917, so that the university actually got to work after the quinquennium. (*a*) *The Benares Hindu University.*

The main features in this new departure are as follows. First, the university is denominational. Though persons of all classes, castes and creeds may be admitted, religious instruction will be imparted in the Hindu religion only and may by statute be made compulsory upon Hindu students; and membership of the Court is restricted to Hindus (the word 'Hindu' being taken throughout to include Jain and Sikh). Second, the university is founded to meet a popular demand, backed by large private contributions, and is, in some important respects, more independent than its predecessors. The Act requires that a portion (50 lakhs) of these contributions (in no small measure due to the generosity of Ruling Princes) be invested as a permanent endowment to meet recurring charges. Government has also undertaken to allot one lakh per annum. Appointment to the posts of Chancellor and Vice-Chancellor will not, as in the older universities, be limited to the head of the imperial or local administration, or made by nomination of government, but will be decided through election by the Court. The State will have no power of nomination to the governing bodies save that the Lieutenant-Governor will nominate five members to a senate which may consist of 50 members. The council will appoint principals of colleges, university professors, etc. At the same time, control by government is provided. The Lieutenant-Governor of the United Provinces is the Visitor, with powers of inspection, of annulment, after due enquiry, of proceedings which are not in conformity with law, of the admission of colleges and of final sanction to the Vice-Chancellor's appointment and (save where this power is reserved to the Governor-General in Council) to new or modified statutes and regulations. The Viceroy is styled Lord Rector and the Government of India retain an emergency power to issue (again after due enquiry) instructions incumbent on the court in case of mismanagement, etc. Third, the university is not an affiliating body with colleges scattered over a vast area, but a unitary university in the sense that its jurisdiction is limited to Benares and that, though the admission of colleges is permissible, the entire organisation of study will be in the hands of the senate. Fourth, an important change is made in the constitution and functions of the governing bodies. The five existing universities possess senates composed both of teaching and of lay elements, which are further organised in faculties, and syndicates which are really executive committees of the senates, being mainly elected by them and by the faculties. These syndicates indiscriminately perform administrative and academic functions. At Benares, administration is vested in a court, which is the supreme body, mainly composed of donors and their representatives and persons elected by various bodies (including the senate), and in a smaller council, mainly elected by and from the court (the senate sending five of its members as representatives) which is the executive of the court. On the other hand, academic control—the courses of study, instruction, examination, general discipline, the

conferment of degrees, the organisation of faculties, the award of fellowships, prizes, etc.—is vested in a senate, which though it contains representatives of the court and of the graduates, who need not necessarily be teachers, includes the principals of the colleges and university professors as well as teachers elected by the senate; and in a syndicate, two-thirds of whose ordinary members will be principals or professors. The statutes and the regulations, too, are separated, the former dealing with administration and being framed by the court, the latter dealing with academic matters and being framed by the senate.*

The Central Hindu College, handed over to and maintained by the university, forms the nucleus of the institution. An extensive site outside but adjoining the city has been acquired. The foundation stone was laid by Lord Hardinge, and the work of erection is now proceeding. For the present, instruction is carried on in the college upon its old site. Meantime the machinery of the university has been brought into being. Their Highnesses the Maharajas of Mysore and Gwalior have been declared Chancellor and Pro-Chancellor; statutes and regulations have been framed, etc. The university sustained a severe loss in 1918, through the death of the Hon'ble Sir Sundar Lal, who, as one of the principal promoters and the first Vice-Chancellor of this university and previously as Vice-Chancellor of the University of Allahabad, had done great service in the cause of education.

(b) The Patna University.

161. The object of the Patna University Act was to provide the new province of Bihar and Orissa with a university primarily of the residential and teaching type. But, "in view of the existence of colleges in other parts of the province and the local feeling in favour of their retention, it was decided that the university should comprise colleges situated at centres other than Patna." The scheme was first considered by a committee of seventeen members containing nine non-officials. This committee proposed a central university where six colleges (including the existing Patna, Bihar National and Training Colleges, a new government college, a new mission college and a Sanskrit college) should be erected on a site near the capital of the province, boys resident in the city being provided for by a non-collegiate department. External colleges were for the present to be limited to four existing institutions (to the exclusion of a small college at Monghyr). Honours, mastership and nearly all the science teaching above the intermediate was to be imparted at Patna only and by the university itself. The constitution was to comprise a large convocation to deal with general questions and legislation and a council composed of the Vice-Chancellor (a whole-time officer), two *ex officio* members, the principals of all colleges, whether internal or external, the dean of the non-collegiate students, six members of the staff nominated by the Chancellor and seven persons elected by convocation. The council was to be the executive authority, with power over the staff, arrangements for teaching and examination, conferment of degrees, etc. Its decision would not be subject to revision by convocation. The capital cost of the whole project was estimated at 92$\frac{1}{2}$ lakhs, the recurring cost at nearly 11$\frac{1}{2}$ lakhs or, allowing for present expenditure, fees, etc., over 6 lakhs net. These sums included not only the erection and maintenance of institutions on the central site but also the thorough improvement and in some cases the rebuilding of the outlying colleges.

The report was published and circulated for criticism. The bill, as finally introduced by government into the Imperial Legislative Council, did not limit the external colleges to four (indeed the committee had contemplated a larger number in the future), but to institutions founded at the centres where those four colleges were situated. The constitution was modified to resemble that of the older universities—a senate of *ex officio* and 60 ordinary members, of whom 12 would be elected and the remainder nominated by the Chancellor, and a syndicate of three *ex officio*, four nominated and nine elected members. The whole-time Vice-Chancellor and the independent authority of the syndicate were retained.

* This description of the principal bodies and officers of the university must be interpreted as referring to their normal constitution or appointment. The first Chancellor, Pro-Chancellor, Vice-Chancellor, Court and Senate were notified by the Governor-General in Council.

Certain features of the measure met with opposition. This opposition mainly centred round the proposal that the syndicate (largely, though not wholly, professional) should exercise independent powers, the checks to be exercised by government and the limitation of collegiate centres. Fears were expressed that popular control would be minimised, that government control would be rendered over-powerful and that an arrangement, intended to group colleges at centres where academic surroundings were possible and thus to prevent the growth of weak and isolated institutions, would stem the development of higher education. Nor did other proposals escape criticism. The Act emerged from Council (shortly after the close of the quinquennium) in a modified form. The idea of a central university site just outside Patna is retained; but in place of the non-collegiate department, one of the existing colleges is to be kept up in the city as a non-residential institution. The second grade college at Monghyr is retained as a recognised institution; and, though the number of approved centres remains five (including the university area at Patna), second grade colleges may be opened without restriction as to their location and, with the sanction of the Government of India, first grade colleges too may be established at other places. An important deviation from the provisions of the Act of 1904 is that whereby government is deprived of its independent judgment regarding affiliation and disaffiliation of colleges and its power of final decision is limited to those cases which have been forwarded with the approval of the syndicate and the senate. The powers of government are curtailed in other ways also and popular control is increased. It is not expressly stated that the Vice-Chancellor shall be a whole-time officer of the university (though the first Vice-Chancellor does fulfil this condition). The nominated element in the senate is cut down to a maximum of 25 members and the elected element raised to a maximum of 50. In addition to the registered graduates, new electorates have been introduced—the teaching staff of colleges, graduate teachers of schools, associations and public bodies. The syndicate contains four *ex officio* members and 14 elected by the senate, of whom at least seven must be on the staff of the university or the colleges. Hence, while it will be preponderatingly professorial (the *ex officio* members being the Vice-Chancellor, the Director and the principals of the two chief colleges), the nominated element is eliminated from the syndicate. Moreover, the independent powers of the syndicate have been narrowed and acts done in connection with these powers may be revised by the senate on a joint reference made by not less than six members of the syndicate.*

The financial position has demanded curtailment of the scope of the scheme. The full number of colleges contemplated on the university site and the improvements proposed in external colleges are at present impossible of realisation. Still less can professional colleges be added—the failure to provide which had formed another line of criticism. Nevertheless the university has commenced operations with the facilities immediately to hand, the site has been acquired, and it is hoped, when the financial situation permits, to remove the Patna college and other institutions to their new location. As regards the ultimate shape of this university, the ideal has been foreshadowed that Patna will eventually emerge as a truly centralised university through the separation from it of the other four centres when their collegiate institutions are sufficiently strong to exist as independent entities.

(c) *The Mysore university and the Indian University for women.*

162. Two other universities have commenced operations during the quinquennium. In the Native State of Mysore a university was incorporated and commenced operations on the 1st July 1916. It comprises two colleges at Mysore city and one at Bangalore. The other is Professor Karve's Indian University for Women. The aim of this institution appears to be to affiliate various institutions for the education of women, with Poona as the centre, in the endeavour to impart higher instruction through the vernaculars. The university is private and has not sought incorporation by law.

(d) *Schemes for Dacca, Rangoon and Nagpur.*

163. Other pending schemes are those for universities at Dacca, Rangoon and Nagpur. They have received careful consideration during the quin-

* This description of the principal bodies of the university must be interpreted as referring to their normal constitution. The members of the first senate and syndicate were scheduled to the Act.

quennium. Unsatisfactory financial conditions and the desire of the Government of India that new universities should be able to profit by the recommendations of the Calcutta University Commission now sitting, have necessitated delay. The Dacca and Nagpur proposals were framed by committees and have been widely circulated for criticism. The former aims at the centralised type of university of which Benares furnishes an example. The latter would follow rather the model of Patna, comprising a group of institutions at Nagpur and outlying collegiate centres at Jubbulpore and Amraoti.

Other demands.

164. The Bombay Director says that a demand is being made in some quarters for the establishment of a local university at Poona and that Ahmedabad will sooner or later claim consideration when the redistribution of university facilities has been brought within the bounds of practical politics.

The Serampore college.

165. The Mission College at Serampore near Calcutta enjoys degree-giving rights under a treaty with the King of Denmark. Negotiations have been in progress during the quinquennium with a view to legalising certain changes desired by the Mission.

VI.—Future developments.

The Calcutta University Commission.

166. Thus two lines of development are running side by side. The old universities continue mainly, as they were in the past, affiliating institutions, though their teaching functions, especially in the case of Calcutta, are being expanded. Meantime, new universities are springing into life—some replicas of the old, but with smaller areas and with an endeavour at partial concentration round the university site; others completely centralised and primarily teaching institutions. It is recognised that university problems in India are of a far-reaching nature and that the best professional advice is requisite at the present juncture. The history of the Calcutta University Commission will belong to another quinquennium and to a future review. But it is impossible to close this chapter without some allusion to its creation. Its terms of reference are confined to the University of Calcutta, in which the characteristics of the affiliating system are exemplified in an extreme form. But the recommendations of Dr. Sadler and his colleagues will be awaited with interest by those concerned not merely with that institution but also with the others of similar type and with the new schemes which have already ripened or are nearing maturity. His Excellency Lord Chelmsford, in addressing the recipients of degrees at the Convocation of January 6th, 1917, said, "Each generation has its particular call and for you in these days, I believe the call has come to do something for the education of your country and the improvement of its material welfare. I am fully aware of the difficulties. Only the other day I asked a law student why he was taking up law with all its risks and disappointments. He answered, What else is there for me to take up? I am not going to discuss his answer, though it gives cause to think, but this I will say, it is my sincere hope and it is the policy of my government to endeavour by all means in our power to open up other avenues of employment. So long as students think that the only avenues of employment are in the legal and clerical professions, so long shall we get congestion and over-crowding in those professions with consequent discouragement, disappointment and discontent. Our policy then is first to secure that there shall be as many opportunities of a livelihood as possible opened to the educated classes and next to endeavour to divert the students into channels other than those of law and government clerical employ." In the course of the same speech he announced the creation of the Commission as a necessary preliminary to a constructive policy and his determination that its composition should ensure the consideration of educational problems with a single eye to educational efficiency.

CHAPTER VII.

ARTS COLLEGES.

I.—General.

167. Colleges are divided according to (*a*) the subjects which are taught in them and (*b*) the standard to which the subjects are taught. *Kinds of colleges.*

Arts colleges are those which give a general education and do not specially prepare candidates for any profession. Professional colleges are those of law (though law classes are sometimes held in combination with arts classes), medicine, engineering, teaching, agriculture, etc. These latter are treated in chapters XI and XII. Arts colleges are sub-divided into English arts colleges in which are studied the subjects of the faculties of arts and science, and oriental colleges, which sometimes teach the arts courses prescribed by the universities, with special attention to oriental languages, and sometimes offer instruction solely in the oriental classics according to their own curricula. Oriental colleges are described in chapter X. The present chapter is mainly concerned with English arts colleges.

The second line of division is into first and second grade colleges. The latter is an incomplete institution, teaching only to the intermediate standard. A first grade college teaches the full graduate course and sometimes carries instruction further to the M. A. or M.Sc. degree. The life history of the college is generally one of growth from the high school into the second grade and thence into the first grade college, at first with affiliation in a few subjects, but gradually blossoming out into more numerous courses of instruction and finally perhaps adding honours courses or even, though this is more rare, the mastership course in one or two subjects.

168. The organisation of the college system does not vary perceptibly in point of form from province to province. But, when the number of colleges in each province, their location and their efficiency as judged by staff and cost are investigated, considerable differences emerge in the manners in which the organisation has actually developed. Madras, Bengal and the United Provinces represent what may be called the extensive development of the system, colleges having sprung up at many and often comparatively small places. Madras, again, has numerous Mission colleges, a large number of second grade colleges and a smaller average enrolment than is found in Bengal; while in the United Provinces there is a tendency to concentration in large cities like Allahabad, Lucknow and Agra, which would seem to favour the growth of separate universities. Bombay and the Punjab represent the intensive development. Bombay has eight colleges, six of which are situated in Bombay city and Poona, while the other two are in the important centres of Karachi and Ahmedabad. Only since the close of the quinquennium has another college centre been opened at Dharwar. All the eleven colleges of the Punjab, save three, are situated at Lahore. The other provinces are less fully developed in the matter of collegiate education. The Central Provinces and Assam have each two centres, though in the former province a third is now contemplated for Berar. Burma, the North-West Frontier Province and Delhi possess two colleges each, situated in all cases at the capital of the province. *Organisation*

169. Of the total of 134 arts colleges in British India, 31 are managed by government, 5 by municipalities, and 98 by private bodies. Of these last, 76 are aided and 22 unaided. *Management.*

It is usual for government to maintain a well-staffed and well-equipped college in each large capital town, such as the Presidency Colleges at Madras and Calcutta, the Elphinstone, Muir Central and Government Colleges at Bombay, Allahabad and Lahore. Three privately managed colleges, the Gujarat College, Ahmedabad, the Greer Bhumihar Brahman College, Muzaffarpur, and the Morris College, Nagpur, were transferred to government management during the quinquennium.

By the Act of 1904, a college, in order to gain affiliation from a university, must be administered by a governing body. This rule applies alike to government colleges and to those managed by single individuals. It has already been stated (paragraph 92) that the experiment has been tried in Bengal of vesting substantial powers of appointment in these bodies. Mr. Hornell writes as follows, "Certain powers were, during the quinquennium, delegated to the governing bodies of government colleges. It is hoped that with a certain measure of control these bodies will prove themselves useful. There are, however, difficulties. Theoretically the greater the local interest and control the better. Actually and in particular as regards all matters connected with appointments the central office is bound, seeing that all the colleges are staffed by members of the graded educational service, to scrutinise each proposal in the light of the interests of the services as a whole. Then again it is very undesirable to derogate from the position of the principal in the matter of college discipline, as would be done if all serious punishments were not placed in his hands but in the hands of the governing body. The principals of government colleges have pointed out that they should have the power of suspending and expelling any student without previous reference to the governing bodies." There is some discrepancy of rules in Bengal regarding these last powers, which by order of the local Government, are placed in the hands of the governing body, but are reserved under the university regulations to the principal. This matter is being considered. In spite of these difficulties Mr. Hornell says that there are great possibilities for good in the system of governing bodies for government colleges.

Control.

170. Thus the internal administration of a college is under the agency which manages it, whether that be government or a private association. But the managing agency delegates powers to the governing body (unless the two bodies happen to be identical) and to the principal. As regards the prescription of courses and examinations, colleges are subject to the universities, guided by the university regulations and inspected by persons appointed for that purpose by the universities. Nor does the control of the universities end with these matters. The advisory power of these bodies in the matter of affiliation enables them to dictate to the colleges in certain domestic matters also; and, in the University of Calcutta, there are a Transfer Committee, to which students can appeal or demand a reference in case a transfer certificate is refused, and a Students' Residence Committee, which, though it cannot interfere with internal management, can report to the syndicate if the arrangement of hostels and messes contravenes the regulations; moreover, on application from a student expelled or rusticated by a principal, the Syndicate can issue orders, though before permitting him to continue his studies in another college they are required to make a reference to the principal who inflicted the punishment.

II.—Figures of institutions and students.

Figures for all-India.

171. Arts colleges in British India number 134, and their students 47,135, the corresponding figures in 1912 having been 140 and 29,648. All these arts colleges are for men, save 12. Women are admitted to men's colleges but seldom seek admission. English Arts colleges of the first grade number 84, and those of the second grade 41.

Distribution by provinces.

172. The following table shows the distribution of colleges in British India by provinces.

—	Number of institutions.	Number of students.	Percentage of increase or decrease of students during the quinquennium.
Madras	41	7,910	+60·1
Bombay	8	4,888	+31·4
Bengal	33	18,478	+38·3
United Provinces	19	5,182	+11·3

	Number of institutions.	Number of students.	Percentage of increase or decrease of students during the quinquennium.
Punjab	11	4,236	+ 59·3
Burma	2	663	+ 104·6
Bihar and Orissa	7	2,575	+ 80·1
Central Provinces and Berar	4	1,094	+ 79·9
Assam	2	688	+ 133·0
North-West Frontier Province	2	177	+ 365·8
Other Provinces	5	1,244	..
INDIA	134	47,135	+ 58·9

Of the total number of students 842 are women. These are found mainly in Madras, Bombay, Bengal and the minor administrations. But the number in these last is swollen by the inclusion of some students who, though in colleges, are really in high school classes attached to colleges.

173. Twenty years ago the number of students was less than 14,000. The increase was slow during the next ten years. But in the quinquennium 1907-1912 there was a sudden rise to over 29,000. The quinquennium just closed has witnessed a further increase to 47,135 students. In the past ten years the number has risen from 18,918 to 47,135 and in the past five there has been an increase of 17,487 or 58·9 per cent. on the figure of 1912. Such an increase is without parallel in India. The growing number of pupils in secondary schools mainly accounts for it; it is also stated that the admission tests have been made easier. A few new colleges have been opened (the apparent diminution in the number of institutions is due to reclassification of oriental institutions) but not sufficient to relieve congestion. Hence complaints arise of inadequate accommodation and refusals to admit. As regards the latter complaints, though no doubt difficulties exist, it has to be realised that students frequently apply for admission but, when admitted, do not put in an appearance, to the detriment of others who might otherwise have been enrolled. Thus, at the Patna College in 1916, no less than 81 accepted students failed to join, with the result that the college is not working up to its full numbers. Students rejected at one college, too, often obtain entry at another. There is much confusion at the opening of the academic year, students applying to several colleges at once to ascertain the rate of fees, whether the college offers the particular combination of subjects they wish to study, whether there are vacancies, etc. *Reasons for increase and difficulty of meeting it.*

174. The average attendance is 89·5 per cent. of the enrolment. Attendance is best in Bombay (94·7 per cent.) and lowest in the Central Provinces (84·1 per cent.), Punjab (84·7 per cent.) and in the United Provinces (85·2 per cent.). *Attendance.*

175. As regards caste and creed, the classification is as follows. *Students by communities.*

	Number in arts colleges.	Percentage to male population of the community.
Europeans and Anglo-Indians	896	0·50
Indian Christians	1,391	0·10
Hindus—		
Brahmans	16,517	0·30
Non-Brahmans	21,456	0·03
Muhammadans	4,921	0·02
Buddhists	515	0·01
Parsis	573	1·30
Others	866	0·02
TOTAL	47,135	0·04

The figure for Europeans is misleading, since some of those at college are not in the collegiate stage. Among the larger communities the Brahman easily leads, though it is to be recollected that the class entitled non-Brahmans includes many castes which frequent higher institutions in very varying degrees.

The proportion in which different communities avail themselves of the opportunities of college education may also be seen from the following analysis of the examination results.

—	Europeans and Anglo-Indians.	Indian Christians.	Hindus.		Muhammadans.	Buddhists.	Parsis.	Others.	Total.
			Brahmans.	Non-Brahmans.					
Intermediate passes . .	57	102	2,239	2,980	737	82	66	181	6,444
Degree passes . . .	34	88	1,629	1,807	403	36	70	102	4,169
Post-graduate passes . .	5	18	341	364	62	..	7	11	808
Total .	96	208	4,209	5,151	1,202	118	143	294	11,421

These figures bring out even more strikingly the success of the Brahman community in collegiate education.

III.—Expenditure.

Total expenditure.

176. The total expenditure on arts colleges has risen from ₹47,98,574 to ₹71,03,748. The highest expenditure is incurred in Bengal, where it amounts to ₹18,84,996. The percentage of college expenditure to the total expenditure on education is highest in the United Provinces (7·9) and lowest in Burma (3·2).

Figures of expenditure by provinces, periods and kinds of management, etc., are given in supplemental tables 41 to 43.

Sources from which expenditure is met.

177. The sources from which the expenditure is derived are the following:—

—	Amounts contributed in		Percentage to total expenditure on college education in	
	1911-12.	1916-17.	1911-12.	1916-17.
	R	R		
Provincial Revenues	17,49,548	27,18,764	36·5	38·3
Local Funds	24,850	27,915	0·5	0·4
Municipal Funds	33,783	43,610	0·7	0·6
Fees	18,43,001	32,59,969	38·4	45·9
Endowments	11,47,392	2,96,742	23·9	4·2
Subscriptions and other sources . . .		7,56,748		10·6
Total .	47,98,574	71,03,748	100·0	100·0

The largest increase has been under the head of fees. But this has not been the case in all provinces. The Bombay report states that provincial expenditure has increased cent. per cent. and fees by 67·7 per cent.

Imperial grants.

178. The recurring imperial grant made for colleges during the period was ₹2,84,000, and some of the non-recurring grants also were applied to this object.

Fees.

179. The annual average fee is ₹69·4 against ₹65·2 in 1911-12. The amounts and the incidence for different provinces and periods are shown in supplemental tables 45 and 47. The highest annual incidence per student is in Burma, where it is ₹87·6 and in Madras where it is ₹87. In provinces where college education is not much developed the rate is pitched low, *e.g.*, in

the Central Provinces the incidence is ₹65·8. In the large provinces, the lowest incidence is found in Bengal, the United Provinces and the Punjab, where it is ₹58·1, ₹75·6 and ₹75·8. The incidence in a government college is ₹78·8, in an aided college ₹73·5 and in an unaided college ₹53·3. These figures are slightly lower than the rates charged, because they are based on the fee-collections, and some students are excused, while others excuse themselves, from paying fees. The actual rates vary generally from ₹4 to ₹12 a month. Government colleges ordinarily charge a comparatively high fee, while privately managed colleges tend to charge lower fees. In some provinces a college of the latter type can charge pretty much what fees it likes; and the low rate sometimes pays by attracting large numbers. In other provinces government regulates the rate by causing aided colleges to charge a fee at a proportion of that charged in government colleges. Thus, in the Central Provinces an aided college charges a rupee less than a government college; the government rate was raised from ₹6¼ to ₹7½ a month during the quinquennium, and the aided college rate therewith rose from ₹5¼ to ₹6½. Sometimes however an aided college spontaneously charges higher fees than a government college. Thus, while the Elphinstone College, the chief government college in Bombay, charges ₹120 a year, and the two other government colleges in that presidency charge ₹80 and ₹60, the aided colleges charge respectively ₹102, ₹96 and ₹90. Often the fee charged in the third and fourth years is higher than that in the first and second, and the fee for the M. A. or M.Sc. classes higher still. An extra fee of a rupee or eight annas a month is frequently levied from science students.

180. The average annual cost of educating a college student varies greatly. The averages for the provinces, arranged in order from the highest to the lowest are :— *Average cost of a student.*

	₹
North-West Frontier Province	433·6
Burma	311·1
United Provinces	236·4
Assam	231·9
Central Provinces and Berar	191·1
Madras	170·4
Bombay	165·2
Punjab	158·3
Bihar and Orissa	152·6
Minor Provinces	150·6
Bengal	102·1
India	151·8

The average for India is ₹151·8 and the average cost to public funds is ₹59·6. In a government college the average cost is ₹256·2 and the cost to public funds ₹173·6; in an aided college ₹143·6 and ₹35·6; in an unaided college ₹70·5 and *nil*. The cheapest college is the unaided college in Bengal, where the average cost is ₹55·6, while a case of a college in that presidency is cited where it is only ₹25.

IV.—General developments.

181. The most noticeable point in the preceding section is that the institutions which impart the bulk of university education in India are conducted at an average cost of about £10 per student, and in many cases much less. In government colleges the cost is about £17. In aided institutions, in which the majority of students read, the cost is about £9½.* In unaided colleges it is less than £5. *Grant-in-aid and scale of expenditure.*

* In England and Wales the cost of a student is as follows:—at the University of Birmingham, £71, at Liverpool £58, at Leeds £55, at Manchester £50, at the University of Wales £47, at Bristol £42, at Sheffield £21. In some of these cases the calculation excludes important items of expenditure; *e.g.*, the cost of the Manchester Municipal School of Technology. In some other English universities, the cost is less, owing to the presence of a considerable number of evening or part time students. But at Oxford the cost is £104. In Scotland the cost is £78·7 at St. Andrews, £40 at Edinburgh, £34 at Glasgow (where, however, the figures of expenditure are incomplete), and £33 at Aberdeen. These figures are taken from the Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, pages 680-681, and refer to the year 1913-14. The comparison with India is complicated by the presence in English Universities of students who are not undergoing full collegiate courses and further by the difference in the values of money.

The privately managed college is ordinarily aided by means of a fixed grant, calculated upon the difference between the resources of the institution in the way of fees, interest or endowments and subscriptions, and the income which will maintain it in reasonable efficiency. During the quinquennium the amount thus disbursed as aid from provincial revenues has risen from ₹4,82,110 to ₹7,97,349. But this increase has not even served to cover, so far as average expenditure is concerned, the great enhancement of numbers. The cost of a student in an aided college has actually declined by nearly ₹10, while that in colleges of all kinds has declined by nearly ₹8. The result is that colleges are under-staffed, that this feature has become more marked during the past few years and that reasonable efficiency is regarded as conformity with an inferior standard. This has a marked effect upon instruction, which is aggravated by the fact that many of the students during their earlier years have not emerged from the stage of attainment proper to a school and find difficulty in grappling with university courses and methods.

The college staff.

182. The staff in government colleges ordinarily consists of members of the Indian, provincial and subordinate services. As an example of the proportion, it may be stated that, out of 191 professors and lecturers in such colleges in Bengal, 26 belonged to the first, 90 to the second and 68 to the third of these services, while 7 held outside posts. In privately managed colleges it is usual to employ M.A's and M.Sc's of Indian universities, if possible with a high class in honours; B.A's with experience are also appointed; occasionally men without degrees are found—there are 62 such among the college teachers of Bengal, probably all of them teachers of oriental classical languages. Some of these colleges appoint European principals and occasionally a few European professors. Sometimes, as at the Dayaram Jethmal Sind College at Karachi and the Khalsa College at Amritsar, government makes an arrangement to lend members of the Indian Educational Service and contributes to their pay. Mission colleges are staffed by Europeans and Indians, the former being often honorary or quasi-honorary workers. In the colleges managed by Roman Catholic Orders such workers are numerous. St. Joseph's College at Trichinopoly has 25 European priests on its staff.

183. A problem which has arisen during the quinquennium is that of the performance of the growing administrative work in colleges. This ordinarily falls upon the principal. The question was first raised in reference to the Presidency College at Madras and entailed a reference to other local Governments and to the Secretary of State. It was generally felt that the principal should not be regarded solely as an administrator, but that his duties should include some teaching, as this brings him into close touch with students. At the same time it was realised that he is often overworked and various ways have been suggested of lightening his duties. At the Presidency College, Calcutta, two of the professors have been invested with the functions of bursar and dean in addition to their ordinary duties. They receive allowances in consideration of this work, which is intended to relieve the principal of routine and free him for general supervision and teaching.

Limitation of classes.

184. The question of the staffing of colleges engaged the attention of a sub-committee of the Conference of Directors in January 1917 and has formed the subject of a reference to the University of Calcutta.

The Universities of Calcutta and Allahabad prescribe a limit to the number in a class or a section of a class to which one professor may lecture—150 in the one case and 60 in the other. At Allahabad this appears to be a matter of rule or practice, not of regulation. The other universities lay down no limit, though it is understood that in the Punjab an intermediate class is divided if it exceeds 100. This matter is further discussed in paragraph 186.

Proportion of staff to students.

185. A more important question is the proportion of students to professors which will admit of the proper discharge of the work of a college—that is, not the mere delivery of lectures, but tutorial work, the correction of essays and exercises, the guidance of studies, seminar and laboratory work and the general supervision of the various activities which should make up college life. In England and Wales the proportion is 10 students to each professor or instructor (this includes a number of part-time students), in Scotland 16,

in Ireland 8, in France 21, in Germany 15, in Austria 16, in Japan 12, in Australia 13, in Argentine 10.* In India the figure is 22 students per instructor. This figure is further analysed below.

	Number of students per instructor in				
	Government Colleges.	Municipal Colleges.	Aided Colleges.	Unaided Colleges.	All Colleges.
Madras	14	9	16	10	15
Bombay	20	..	31	24	27
Bengal	19	16	29	40	30
United Provinces	20	..	16	19	17
Punjab	22	..	21	42	27
Burma	21	..	10	..	18
Bihar and Orissa	14	..	27	9	18
Central Provinces and Berar	16	..	31	..	20
Assam	18	..	..	..	18
North-West Frontier Province	..	..	8	..	8
Minor Administration	14	..	17	..	16
Total	18	11	21	34	22

Personal investigation of the staffs of a number of colleges shows that, within these averages, there is considerable variation. Under the same university a government college is found with a proportion of 15 students and a privately managed college with a proportion of 50.

Various opinions have been expressed regarding the proportion which should be observed. In 1906 the University of Calcutta appointed a small commission to inspect *mofussil* colleges. It considered that a proportion of one to 15 between staff and students should be regarded as the lowest which is compatible with efficiency. The Dacca University Committee proposed a proportion of one to $13\frac{1}{2}$; the Patna University Committee proposed one to 12 in the university and constituent colleges (exclusive of special departments, the training college and external colleges); the Central Provinces and Berar University Committee proposed one to about 10 in Nagpur itself and one to 14 in external colleges.

186. Meantime there is no denying the fact that Indian colleges on the whole are understaffed. This affects the life and instructional work. *Methods.*

It is difficult for the staff to know the students personally. Too often the professor delivers his lecture to a class of anything up to 150 or 200, without knowledge of their names, far less of their abilities, and then sees no more of them till the next day. The Government of Madras passed orders just after the close of the quinquennium that each student should be assigned to a member of the staff, who would see him periodically and discuss his general welfare and studies.

Many hold (and perhaps justifiably hold) that the only limits for a class to which a formal lecture is being delivered should be fixed by the size of the room and the carrying power of the professor's voice. But this is a very different matter from tutorial work, which is regarded as the proper complement of lectures. Any tutorial system of studies is impossible with inadequate staffs. This is recognised in several of the reports and the introduction of such a system is regarded as a counsel of perfection. Personal enquiries have elicited the opinion from one principal that owing to increase of numbers there is no room for tutorial classes, from another that the poverty

* Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, page 688. The figures are generally, but not always, for 1913-14. Other sources of information have been consulted. In some cases the calculation is made difficult by the presence of part-time students and of part-time lecturers.

of the students prevents the institution of any adequate system. As a result, the method ordinarily pursued is one of lecturing, which frequently includes the dictation of notes. This is unsuitable for intermediate students, who are at a stage where teaching, not lecturing, is required, and who, one is often assured, cannot properly understand the lectures. It also renders difficult the application of university methods to more advanced students, who require guidance rather than direct instruction.

187. Attempts are indeed made to introduce tutorial systems. Often they prove valueless—the hours devoted to the work are too few, the batches (from 30 to 80) are too large; sometimes the lesson resolves itself into the writing of a composition; sometimes low paid and ill qualified teachers are employed as so-called tutors.

In science teaching tutorial work is largely supplied by laboratory instruction; and here and there, where circumstances permit, a more thorough method of training in arts subjects has been introduced. Some examples are given.

In the Elphinstone College, Bombay, the work of the first year, which is essentially a continuation of school work, is conducted so far as possible in small classes; pupils are expected to prepare lessons beforehand, frequent questions are put to the class and written work is constantly supervised by the teacher. The whole class receives four general lectures in English a week and is also divided into three groups of forty students, each of which receives four hours a week of tutorial instruction, which is carried on largely by question and answer and aims at testing knowledge, eliciting opinion, correcting misunderstandings and generally training the intelligence. The same class is again divided for essay work into ten groups each of twelve students. The whole class writes a weekly essay and the tutor in charge of each of these groups occupies two hours a week in interviewing the students who compose it. Finally, monthly test papers are set to each group by the tutors, and the professors prescribe occasional home work or exercises which are corrected and returned in class. In the second year class the method is rather similar but less detailed. Tutorial work is regarded as inapplicable to the pass B. A. class. But a form of seminar has been established for the honours class. The professor has collected a library of reference books in his room, of which the students have compiled a catalogue and act in turn as librarians. With the help of this library, the students collect material for essays on subjects which will encourage original judgment and elementary research. But even here it is impossible similarly to treat the other subjects of the curriculum.

There is a seminar system at the Muir Central College, Allahabad. A class is divided into groups of five or six students. As often as possible the teacher of the subject concerned takes each group in some topic connected with the course. Sometimes the title of an essay is given and suggestions called for as regards treatment and heads. These suggestions are discussed and finally a scheme is drawn up. In this way the students are encouraged to think the matter out for themselves and then shown individually where their methods fail.

The tutorial method is firmly established in the Punjab colleges. Group meetings are held for discussions, recitations, etc., and the tutor acts as general mentor and supervisor.

The Patna College is in the happy position of possessing a staff which allows one professor to about every 12 students of the average enrolment. An elaborate system of tutorial work has been arranged. Each student in the intermediate arts classes has, in addition to lectures, two tutorial periods in English and one in each of his other subjects a week. Even when the classes are at their maximum limit the groups will not exceed 12 in the first and 15 in the second year. In the B. A. classes the groups are still smaller. Science students are similarly treated. In economics each student receives half an hour's individual instruction weekly. The principal has expressed himself as alive to the danger that these periods of tuition may degenerate into a monotonous system of exercises or mere lectures resembling those delivered to a full class, but he trusts that the system will develop into one of directed and supervised study, teaching the student how to work and remedying the habit of memorising books. As the result of experience, he considers that the knowledge of English has improved, that students can follow lectures more intelligently and express themselves more correctly and that the staff are better able to judge the industry and ability of individuals.

Some of the classes of the Robertson College, Jubbulpore, have a good system, but the Director says that the proportion of students to teachers must be reduced before further progress can be made.

The Director in Bengal mentions a point which is significant as regards the methods ordinarily employed. In very few cases are students found to possess more than the minimum of required text-books. The existence of libraries and the poverty of students are pleaded as the reasons. But the

Director observes that the buying of books seems to have no place in the students' budget—a regrettable fact, since university education should mean more than the mastery of a few text-books.

188. It is sometimes urged against professors in Indian colleges that they are academically undistinguished and produce no original work. Yet they number among their ranks not a few whose attainments would be considered high in any country; and a case recurs to mind where a small college, with a mere handful of professors, possesses two fellows, one of an Oxford, the other of a Cambridge, college, as well as other distinguished scholars. Nor, even were it true that no original work is produced, would this be a cause for surprise, when the burden of instructional work, let alone other activities in the college, makes so great a demand upon the time of a staff incommensurate to the numbers it is expected to teach. Mr. Richey points out that such criticisms do scant justice to a professor—whose surroundings are quite different from those which prevail in an English university. The organisation of games and societies, hostel superintendence, library management, tutorial supervision, university work, and outside duties connected with schools, committees and public libraries keep him fully occupied. "It is at least arguable whether a life spent in such useful activities, many of which will bring him into close personal relationship with his students, is not more valuable in a society where higher education is a new and rapidly expanding phenomenon than a life devoted to research." This question, as here treated, is distinct from the questions whether more original work ought to be attempted and achieved in the colleges and whether the pay offered is sufficient ordinarily to attract professors of sufficient general attainment. *Alleged lack of original work.*

189. Mention has already been made of the expansion of the hostel system for college students. In some provinces it has been most successful and some parents whose sons could attend from home are said to prefer their residence in hostels because of the good influence which it exercises. Other means are used to promote corporate life and common interests. In Calcutta (where residential arrangements are defective) the University Institute, used for social gatherings of students and their elders, acquired a fine building of its own during the quinquennium, to which the Government of India contributed. In the well-managed colleges throughout India there is now an *esprit de corps* and a vigour of life which contrast refreshingly with the languidly laborious existence which less favourably situated students still endure. Athletics, literary, debating and scientific societies, and the production of magazines are usual features of college life, taking to some extent the place of general reading, which, says Mr. Richey, has not the same attraction for Indian as for English youths. Occasionally social service movements are formed and the Khalsa College at Amritsar has a students' co-operative society, which supplies books, school equipment and food. *Corporate life.*

190. Among college buildings the most remarkable constructed during the quinquennium have been the Islamia College, Peshawar, and the Robertson College, Jubbulpore. Both illustrate the type of college removed from the cramping influences of the city. The former has a site of 300 acres along the Khyber road, on which handsome blocks for arts and science classes, hostels and a high school have been erected. The latter has nearly 150 acres of ground four miles from the city and forms a self-contained group, on a picturesque site, with residential quarters for the whole of the staff and the majority of the students. Science buildings have been erected at several colleges, notably a fine laboratory at St. Columba's College (a mission institution) at Hazaribagh in Bihar and Orissa, and a well-equipped physics and biology block at the Government College, Lahore. *Buildings.*

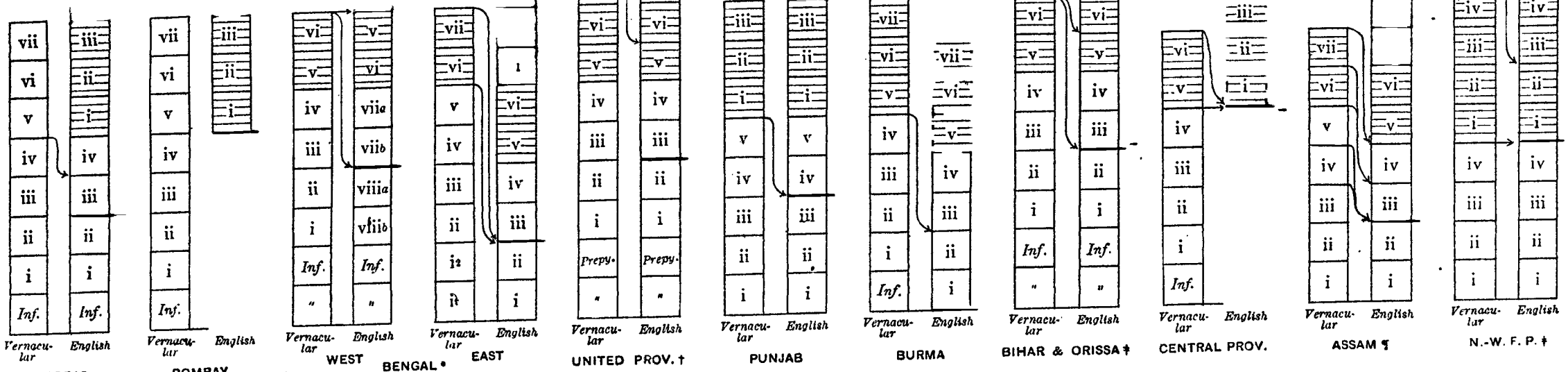
V.—Education in colleges, etc., in the United Kingdom.

191. Many Indians now resort to Europe and some to America and Japan, as State scholars or as private students. Some mention of them may be included not inappropriately in this chapter. A considerable amount of dissatisfaction was expressed during the period regarding arrangements in the United Kingdom for Indians who go to study there. The Students Department had come to be regarded by many of those for whose benefit it was created *Indian students in the United Kingdom.*

as an official and inquisitorial organisation, which instead of assisting students to gain admission to educational institutions placed difficulties in their way. At the same time the educational institutions came in for a share of criticism. It was stated that the older universities had unduly restricted the admission of Indian students and that facilities for the study of law, medicine, engineering and industries were not accorded by the Inns of Court, the hospitals and private firms. The complaint against the Inns of Court and a portion of that against the older universities were based upon the fact that university qualifications obtained in India are not accepted in lieu of certain examinations in England.*

192. As regards the first complaint the fact is sometimes overlooked that British educational institutions are particular about admissions, that recommendations are demanded and that difficulties are experienced by English as well as by Indian students. The intervention of the India Office in this matter, says Sir Charles Mallett in his report for 1915-16, has from the first been dictated solely by the desire to secure for Indians wider openings and an easy entry into universities. In that year the number of Indian students at Oxford increased to about 70 and at Cambridge to 103 and the alleged objection to the system of guardianship, which is entirely voluntary, appears to receive little support from the fact that a majority of these were placed by their relations under the care of the official guardians. The official agencies, namely the Students' Department and the Bureau, do not stand alone. They are assisted by the National Indian Association with its house for students in Cromwell Road, by the Northbrook Society and the Distressed Indian Students Aid Committee, a special advisory committee (which came to an end in 1916) and a Hospitality Committee, while particular stress has been laid upon the local advisory committees in the different provinces in India. Furthermore the organisation of the India Office so far as guardianship is concerned has now been superseded by the creation of a Delegacy of Oriental Students at Oxford and an inter-collegiate committee at Cambridge. As to the treatment of Indians by educational authorities, at the instance of the India Office almost all colleges now reserve places for Indians and often exceed the limit they have laid down. College scholarships and university prizes are fully open to them, one Indian has been awarded a Balliol scholarship and 11 Indians at Cambridge have received scholarships, exhibitions or other prizes during 1916-17. The Inns of Court are largely frequented by Indians and even with reduced numbers there were reported to be about 380 enrolled in 1916. Official recommendations are required by these bodies and Sir Charles Mallett points out that such requirement applies to candidates of any nationality and that it is natural that in the case of Indians the Inns should look to the Indian government for a certificate. There remain the demand of an Indian degree for entry to the Inns and the requirement of some of the High Courts in India of a period of reading in barristers' chambers in London. It has been pointed out that Indian medical students are admitted in large numbers in London and Edinburgh and that a first class medical training can be obtained in other cities besides. The Institution of Civil Engineers has relaxed many of the restrictions which it formerly imposed upon the recognition of exemptions granted to Indian students by certain British universities. The difficulty in obtaining practical experience in civil engineering is not confined to Indians, the fact being that opportunities for such training are rare in Great Britain. Sir Charles Mallett asserts that British employers as a whole are by no means unready to respond when appealed to for facilities of industrial training and

* The exemptions granted by universities in Great Britain are briefly as follows. At Oxford, a B. A. or a B. Sc. of an Indian university is exempted from Responsions. A student who has taken Honours at an Indian university can also take a degree in two instead of in three years and is exempted from the first public examination and from any preliminary examination at the second public examination. At Cambridge an Indian student is exempted from passing the previous examination and can take his degree in two years provided he has passed the intermediate of an Indian university in the first class or B. A. or B. Sc. in the first or second class or at Calcutta with Honours. If, however, he is a student of the Punjab University he must have passed the B. A. or B. Sc. At the London University, a student who can produce a certificate indicating a certain standard *primâ facie* equal to that of the London matriculation may undergo a special examination instead of the matriculation. If he is a graduate of an Indian university he is excused any such examination. The Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds and Sheffield exempt from matriculation those who have passed the intermediate of an Indian university; and the same is the case at Birmingham. In the Scotch universities Indian students are exempted from matriculation if they can give evidence that they have passed examinations which would admit them to Indian universities, provided that certain conditions are fulfilled such as the possession of sufficient knowledge of English, etc.



* In W. Bengal pupils who have read English as an optional subject in a vernacular school may pass from standard vi into class iv ; others must pass to class vii. In E. Bengal vernacular pupils with some knowledge of English may pass into class iv or v.

† In the U. P. the bottom four classes have been detached from Government High Schools and form a distinct class of schools known as 'Preparatory Schools.' A boy who has passed the vernacular Final Examination and desires to read English has to join a special class vi. At the end of one year he passes on to a special class vii and at the end of the second year joins the ordinary class viii.

‡ In B. and O. those who have not read English ordinarily pass into standard iii, but in some schools they pass into a class (below class iv) in which special instruction in English is given to such boys. Those who have read English may pass into class iv, standard vi, standard v or standard iv according to the progress they have made in that language.

¶ In Assam a boy who has passed class iv of a vernacular school may be transferred into a class for which his vernacular education fits him, if he has acquired sufficient English for that class. Boys from the higher classes of Vernacular schools knowing no English are passed on transfer rapidly through the middle English course, in high schools, arrangements being made to give them special instruction in English

‡ In the N.-W. F. P. boys entering an Anglo-Vernacular school after passing the vernacular middle examination are expected to spend two years, mainly in the study of English, before proceeding to the high department. In Government schools there are special preparatory classes for such boys, known as the junior special and senior special classes. In other schools provision is not always made for special classes, and the boys frequently start English in the first middle (for three months), continue in the second middle for the next three months, and the third middle for the next six months, and finally spend a year in the fourth middle before being promoted to the high department.

High Stage (above Middle)

Middle Stage

Primary Stage (below Middle)

English teaching begins

English used as a medium of instruction

English used as a medium of instruction in some subjects

Passage to English schools

SCHEME OF SCHOOL CLASSES.

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a long list of firms is given which have responded to the requests of the India Office in this respect. As regards the third complaint, that Indian qualifications are insufficiently recognised, the question has been referred to the Indian universities. There remain certain other matters such as the exclusion of Indians from the Officers Training Corps. But there can be no doubt that during the quinquennium scrupulous care has been paid to complaints which were not always based upon a sound foundation and as regards prejudice Sir Charles Mallett instances such reasons as unpaid debts, hasty marriages, etc., and says that apart from difficulties of this nature Indian students as a whole have no reason to fear their welcome in Great Britain.

A local advisory committee is now established in each province in India. Bengal has two such committees. Of the smaller administrations, Ajmer-Merwara alone maintains a committee. A meeting of the secretaries of these committees was held in Simla in July 1917, from which useful results are expected to flow.

VI.—General result.

193. The feature of the quinquennium has been the great expansion in numbers. Improvements have been effected; but these are too often nullified by the necessity of making hurried arrangements for the accommodation of additional students. The number of students per instructor is decreasing. The poor attainments of students coming from the secondary schools hamper the work of professors. Science teaching, conducted to a considerable extent in laboratories, has improved in quality. In other subjects the lecture holds the field and systematic tuition and guidance are often lacking.

CHAPTER VIII.

SECONDARY EDUCATION.

I.—General.

Organisation.

194. Secondary education is that which follows the primary course. It is either vernacular or Anglo-vernacular. The scheme of school classes reproduced with this chapter shows the systems adopted in various provinces for both vernacular and Anglo-vernacular schools and incidentally for primary schools.

The secondary stage is ordinarily divided into two standards—the middle, where a boy is generally prepared for the high stage; and the high, where a boy is generally prepared for the matriculation or other form of school leaving examination. Thus a second classification arises between incomplete and complete secondary schools. Every secondary school, however, must contain either the middle or the high stage, even if it does not contain both. Generally a high school contains the middle classes. Frequently, too, a secondary school contains the primary classes. In Bombay and the Central Provinces primary classes are not found in secondary schools, and in some parts of Bombay the high school contains only the high classes.* Elsewhere, too, the primary section is sometimes relegated to the ordinary elementary school or (as in the United Provinces) to a special kind of preparatory school. Other variations between provinces are the length of the entire course and of the secondary course and the division of the latter, which may contain four middle classes and two high, or two middle and four high, or three of each and so forth.

These remarks are not fully applicable to vernacular secondary schools. They do not lead up to a university career or to the other openings provided by an education in English. Nor are their classes organised beyond the middle stage, save in Burma, where a small number of vernacular high schools are found. The object of these schools is rather to afford an opportunity of further

* In general table V pupils of secondary schools of Bombay shown in the primary stage belong to European or English teaching schools. In the Central Provinces, only middle vernacular schools have primary classes.

study to boys who are not content with a merely elementary education but who do not desire, or for some reason are unable, to learn English. The completion of their highest standard and the examination which sometimes succeeds it mark the completion of such a pupil's general education or admit him to such vocational institutions as do not require a knowledge of English—*e.g.*, normal and some technical schools. Hence they are classed as primary in Madras and Bombay; and, though elsewhere they figure in the tables among secondary schools and will receive some mention in this chapter, their description is, as usual, included in the chapter on primary education.

Transfer from Vernacular to Anglo-Vernacular classes.

195. Middle vernacular schools are for the most part found in the rural tracts (one Director indeed terms them 'rural secondary schools'), where English education is less accessible than in the towns. A difficult problem is presented by the case of the country boy who has studied in a vernacular school and, finding himself possessed of the necessary funds or brains, desires transfer to an English school. Where the commencement of English is postponed to a late stage of the secondary course and the course in the lower classes is the same as in the primary school, this difficulty does not arise, since a boy will ordinarily seek transfer at the stage when English is commenced. But this is not always the case; in the Punjab English commences in the fourth class of a secondary school, in Burma in the first. Moreover, if a boy waits till he has completed the upper primary or the whole or part of the middle vernacular course, he will find himself handicapped in respect of English when he goes to the Anglo-vernacular school. Various remedies have been tried.

In *Madras*, as related in para. 172 of the last review, a sharp distinction had been drawn between secondary and elementary education, and steps were taken to prevent transfers from the latter to the former. It has been found in practice impossible to maintain this clear demarcation or the rules which prevented such transfer. The abolition of the large additional fee levied on pupils seeking direct admission to high or middle classes is under consideration. The Director foresees that means will have to be sought for protecting secondary schools from a large influx of ill-prepared boys from elementary schools and that it may even be necessary to prescribe some examination for admission, though he does not at present propose it. In *Bengal* and *Bihar and Orissa* a boy can transfer himself without loss of time at the end of the lower primary stage, after which English is commenced in Anglo-vernacular schools. Thereafter he must transfer himself to the lowest upper primary class, with the effect that, if he has passed the middle vernacular standard, he loses four years. But transfer to a higher class may be sanctioned by the inspector, if the pupil has studied English privately and at a few schools in Bihar and Orissa an arrangement has been made whereby such a pupil can receive special tuition and lose only one year. In the *United Provinces* a pupil who has passed the vernacular final examination joins a special class VI and in the next year a special class VII. He thereafter proceeds to ordinary class VIII, thereby losing two years. In the *Punjab* a boy who has gone through the five vernacular classes and then seeks transfer finds himself in point of English two classes behind those who have gone through a similar number of classes in the Anglo-vernacular school, and is required to spend a year studying English in a class known as the junior special before he can proceed to the lowest of the five secondary classes. If however he has completed the middle vernacular course he is five years behindhand and has to make up his knowledge of English by two years' study in the special classes before he can proceed to the two higher standards. Notwithstanding the apparent reasonableness of this concession, the Director considers that it operates very harshly in the case of pupils who do not live in the neighbourhood of Anglo-vernacular schools. In *Burma* the difficulty is peculiarly great owing to the fact that English is commenced in the lowest class of an Anglo-vernacular school. The means of transition are not fully developed, but a child who passes through the fourth or any higher standard in a vernacular school may be placed in the third Anglo-vernacular standard—that namely in which the study of written English is begun. In *Assam*, it was decided in 1913 that boys in vernacular classes III and IV should enter in Anglo-vernacular class III, boys in classes V and VI in class IV, and boys in class VII in class V. Pupils in the *North-West Frontier Province* who have passed through a middle vernacular school of eight classes can transfer themselves to the seventh Anglo-vernacular class, thus losing two years in place of the four years of English study which they have missed.

In *other provinces* there appear to be no special arrangements and, as English is begun generally in the sixth standard from the bottom of the school, probably none is required. In all provinces, wherever transfer is sought at a stage before English has been begun, it can be obtained into the equivalent class.

196. It is the policy of government to leave the extension of secondary education mainly to private agency but to maintain a government high school in each district. The latter part of this policy is not literally carried out. There are 267 districts in British India, whereas high schools for boys maintained by government number only 237 (with another 20 for girls). Madras with 24 districts has only 5 government high schools. Assam, on the other hand, where the policy has been initiated of having government high schools at sub-divisional headquarters, has 18 government high schools for 12 districts. The total number of government secondary schools, for boys and girls whether high or middle, English or vernacular, is 479, of those managed by boards and municipalities 1,430 and of privately managed schools 5,784, of which 4,350 are aided and 1,434 are unaided. *Management.*

In some provinces there are committees of management for both government and aided schools. This is especially the case in the eastern provinces where the University of Calcutta has insisted upon the establishment of such committees. In Bengal, government high schools have committees consisting of the district magistrate as president, the headmaster, representatives of the staff and the parents of pupils and an official who is other than an educational officer. The Director says that definite functions are exercised by the committees and that the arrangement offers ample scope for initiative and real control. It is stated that in Burma this arrangement does not always benefit the schools, since it introduces confusion of control. The Government of Bengal are considering revised rules for committees of aided schools. In Assam these consist of a minimum of six and a maximum of seven members, various classes being represented. As a matter of fact it is not difficult for a school to remain of the proprietary type with a nominal committee.

197. The general control exercised over high schools is twofold. The university ordinarily recognises a high school for the purpose of presenting pupils at the matriculation. It also lays down the courses of the highest classes. The local Government on the other hand gives grants-in-aid, recognises schools for the privilege of presenting pupils at the scholarship examinations and for receiving government scholars and lays down inter-school rules, etc. Madras differs from other provinces in that the recognition of schools for matriculation is the act of the local Government and the school leaving certificate, which is conducted by a board under government, has now practically ousted the matriculation. In other provinces the university ordinarily though not always accepts the reports of the government inspectors. The Director in Bombay considers that recognition by government for participation in inter-school rules, scholarship privileges, etc., gives to the department effective means of requiring new schools to conform to its regulations. But in provinces where the inspecting staff is numerically weak and where differences are likely to occur between the department and the university, the control exercised by government over privately managed high schools is necessarily weak. *Control.*

Various statements are included in the Bengal report to the effect that the recommendations of the inspectors are sometimes overlooked by the university, that although the regulations of the university prescribe the submission of a report on each recognised school once a year no reports have been called for for several years; that permanent recognition was too readily given in the past and some schools have shown no improvement since it was granted; that the department is therefore unwilling to recommend permanent recognition since the university is unwilling to withdraw it even when it is no longer deserved; and that the minimum demand made by the university is too low. Mr. Hornell considers that the recommendations of the inspectors are invariably treated with consideration but that the situation is full of possibilities of friction and misunderstanding; hence he does not altogether endorse the remarks which he has quoted but he considers the present system to be cumbersome and ineffective. He writes as follows :—" The Syndicate would be overworked, even if its responsibilities were confined to colleges and university matters. It is astonishing that any one should seriously maintain that it can in addition to these duties be an effective arbiter of the destinies of 698 high schools in Bengal, to say nothing of all the high schools in Assam and Burma. Moreover the syndicate is and must be a body local to Calcutta; by its constitution it need not

contain a single member, with the possible exception of the Bengal Director, who is frequently absent from Calcutta, who is in touch with school work at all. The opposition to any change is based on a feeling that the fate of a school should not depend upon a single official. I am not aware that it was ever suggested that it should. Many difficult questions are involved. It might for example be asked with some reason whether it is really desirable that all secondary school education should be directed towards the matriculation examination as its one and only goal and object. That all secondary education is so directed is the only possible justification for the existing system; and after all of every 100 boys who start on the high school course, 16 only begin the university course."

The recognition of middle schools and the framing of the curricula of these schools and of middle classes of high schools are the work of the local Governments.

II.—Figures of institutions and pupils.

Figures for all-India.

198. The total number of institutions in India, for boys and girls, has risen from 6,370 to 7,693; that of pupils in them from 924,370 to 1,186,335 or by 28·3 per cent. High and middle English schools, with which this chapter is specially concerned, have increased from 4,011 to 4,883 and their pupils from 702,566 to 924,770 or by 31·6 per cent.

Distribution by provinces.

199. The distribution of secondary schools of all kinds among the provinces and the area served in each by a single school are as follows:—

Province	Number of secondary schools.	Number of pupils.	Percentage of increase in pupils during quinquennium.	Number of square miles served by a secondary school.
Madras	449	149,892	+35·9	316·9
Bombay	465	70,550	— 5·4	264·6
Bengal	2,756	415,455	+32·6	28·5
United Provinces	761	100,164	+ 3·2	139·8
Punjab	497	122,511	+23·3	199·7
Burma	1,400	128,843	+51·2	164·9
Bihar and Orissa	483	72,891	+31·1	172 3
Central Provinces and Berar	457	58,989	+ 6·7	218·4
Assam	286	39,610	+70·7	185·4
North-West Frontier Province	54	13,400	+43·6	244·3
Minor Administrations	85	14,030		695·4
INDIA	7,693	1,186,335	28·3	134·5

The decrease in Bombay is apparent only, being due to the exclusion of Native States (paragraph 39) and partly to a change in the time of commencing term and holding examinations. The apparently small increase in the United Provinces is explained in paragraph 287. The exclusion of figures for the Native States has depressed the percentage of increase in some other provinces—notably Bihar and Orissa and the Central Provinces.

200. But, since a single school often contains different standards, it is necessary to show the distribution of pupils by stages :— *Pupils by stages.*

	1911-12.	1916-17.	Percentage of increase.
High stage	141,695	216,160	52·5
Middle stage	268,850	374,662	39·3
Primary stage	513,825	596,180	16·0
TOTAL	924,370	1,187,002*	28·3

These figures show, even more clearly than those which relate to the totals of pupils, the remarkable advance which has taken place in secondary education during the quinquennium.

201. This advance is one of the main features of the quinquennium. It has been most rapid in Assam, Burma, and the North-West Frontier Province. But even in the United Provinces, where the figure of increase is low, the demand for more facilities is insistent. The popularity of secondary education is greatest in Bengal, which contains 35·8 per cent. of all the secondary schools and 35 per cent. of all the secondary pupils in India, which has a secondary school for every 28·5 square miles and among whose divisions Dacca shows the remarkable average of 154 English schools per district. Mr. Hornell analyses this popularity, basing his remarks upon a report made by a Bengali civilian regarding the demand for secondary education. *Reasons for large increase.*

The first four reasons assigned are of a local character. They are the agitation produced by the partition of Bengal which gave new impetus to education, the policy pursued by the Government of Eastern Bengal and Assam of fostering education in the newly formed province and especially among the Muhammadans, the high price of jute which puts money into the pockets of the people and the belief that since the introduction of the new regulations of the university the matriculation has been easy. The other reasons which he puts forward, though they no doubt operate with particular force in Bengal, are more or less common to India as a whole. The pressure of the increasing population on the soil forces the cultivating class to seek other means of employment for a certain number of their children. The middle classes have always educated their children and this practice is becoming even commoner since the means of livelihood are growing more difficult. Other classes which previously did not send their children to secondary schools are now doing so in order that their sons may rank as respectable and because some encouragement is given to these classes to enter government services which were previously considered the monopoly of the middle classes.

Briefly it may be said that the reasons for the great increase in higher education is twofold. First, a strong sentiment is growing in favour of professions which are deemed respectable and which provide a more or less sedentary life. Second, great economic changes have been at work. Easier communications, etc., have rendered profitable the production of marketable crops other than cereals. Wealth has increased, especially among the cultivating and lower classes; consequently the cost of living has risen. Meantime the wages of the great bulk of the professional classes have not increased. The movement therefore which has enriched the cultivators and made it possible for them to aspire to an education and a career for their children of which they would previously not have dreamed has forced a larger number of the middle classes to seek their livelihood through education and the employment which it brings.

202. The average percentage of attendance is 86·2, being 87·5 for Government, 82·9 for local board and municipal, 87·5 for aided and 85·1 for unaided schools. Attendance is best in Burma (97·5 per cent.), Madras (89·4 per cent.) and the Punjab (88·6 per cent.). *Attendance.*

* Footnote to general table III explains the small discrepancy.

Pupils by communities.

203. The proportion of boys of different communities found in secondary English schools is shown below.

Community.	Total number of boys in secondary English schools.	Percentage to total male population of the community.	Per cent. of increase in the last five years.
Europeans and Anglo-Indians	17,923	10·4	17·7
Indian Christians	27,900	2·5	19·4
Hindus — Brahmans	192,057	3·1	27·2
Hindus — Non-Brahmans	421,888	0·5	35·8
Muhammadans	171,135	0·6	28·6
Buddhists	21,906	0·4	39·2
Parsis	5,340	12·0	—3·2
Others	15,950	0·3	37·7
TOTAL	874,099	0·7	31·2

Among the larger communities Brahmans retain an easy lead in their proportionate representation in secondary institutions, though quite out-distanced by some of the smaller communities.

III.—Expenditure.

Total expenditure.

204. The total expenditure on secondary schools of all kinds has risen from ₹2,07,88,725 to ₹3,19,29,182. The highest expenditure is incurred in Bengal where it amounts to ₹86,39,772, and constitutes 35·5 per cent. of the total expenditure on education. In other provinces Burma shows the highest percentage (45 per cent.) and Bihar and Orissa the lowest (21 per cent.), while Madras shows 21·8 per cent. The high percentage in Burma is due to the number of middle vernacular schools and to the fact that the greater number of primary pupils are enrolled in the lower classes of secondary institutions.

The highest proportional increase has been in the North-West Frontier Province, where expenditure has grown by 111 per cent., next in the Punjab (66·2 per cent.), and next in the Central Provinces and in Madras (51·6 and 54·4 per cent.).

Sources from which expenditure is met.

205. The sources from which the expenditure is derived are the following.

	Amount contributed in		Percentage to total expenditure on secondary education in	
	1911-12.	1916-17.	1911-12.	1916-17.
	Rs.	Rs.		
Provincial funds	42,81,105	71,71,799	20·6	22·5
Local funds	11,38,265	18,38,358	5·5	5·7
Municipal funds	7,43,946	10,70,671	3·6	3·4
Fees	1,05,25,878	1,67,46,922	50·6	52·5
Endowments	40,99,531	14,20,092	19·7	4·4
Subscriptions		36,81,340		11·5
TOTAL	2,07,88,725	3,19,29,182	100·0	100·0

Thus slightly less than one-third of the expenditure is contributed from public sources and the extent to which secondary education is self-supporting is an additional proof of its popularity.

206. The increase includes the expenditure of imperial grants, out of which about 25½ lakhs recurring were given for secondary schools for Indians. Considerable sums out of the non-recurring grants have been devoted to this class of education. *Imperial grants.*

207. The average annual fee for a pupil in a secondary English school for Indian boys is shown by provinces in supplemental table 68. The average fee has risen from ₹14·1 to ₹17·6. It is ₹24·5 in a government school, and ₹14·7, ₹17·3 and ₹16·4 in a board or municipal, an aided and an unaided school respectively. The average fee is highest in Burma (₹30·8) and lowest in the North-West Frontier Province (₹10·4). *Fees.*

Government can prescribe the fee-rates in the schools which it maintains and in aided schools. In the latter the rate is generally two-thirds of that for the former. But privately managed schools sometimes charge a higher fee than do government schools; the Director in the Central Provinces notes this as being largely the case in Berar.

There had been a general raising of fees at the end of the previous quinquennium, and fears had been entertained that this might deter pupils from entering the schools. On the contrary, there has been a remarkable increase in the number of pupils.

The tendency was noticed in the last review to equalise the rates in the classes of each department of the school. This practice, already in force in Madras and Bombay, has now been adopted in the North-West Frontier Province. It simplifies accounts and emphasises the unity of the school.

208. The average annual cost of a secondary school (inclusive of all types) is ₹4,150 and of a pupil ₹27·6. The corresponding figures for secondary English schools for boys are given in supplemental tables 66 and 67. The average annual cost of an Indian in an English school is now ₹28·9 as against ₹24·9 in 1911-12. In a government English school an Indian boy costs ₹49, in a board or municipal school ₹24, in an aided school ₹28, and in an unaided school ₹21. The provincial variations are considerable, *e.g.*, ₹19·9 in Bengal, ₹31·7 in the North-West Frontier Province, ₹42·1 in Bombay and ₹61·1 in Burma. *Average cost of a school and of a pupil.*

IV.—General developments.

209. The changes which have taken place during the quinquennium have generally been dictated by the largely increasing demand for secondary education, the recognition of the responsibility of government for providing facilities at the larger centres of population, the desire to relieve local bodies from burdens connected with secondary education and free their funds for use upon elementary instruction*, and the urgency of effecting improvement in the lot of teachers. Other schemes of reform have been connected with the liberalisation of grant-in-aid systems, the development of school-leaving examinations and the improvement of courses. *Tendencies in the quinquennium.*

210. In October 1906 the Government of India had addressed local governments inviting proposals for the development of secondary education and indicating certain lines of advance. The schemes framed in response were described in the last review. *Schemes.*

The proposal to convert into government schools a certain number of institutions in *Madras* met with opposition and was dropped. The proposals made in 1912 for the improvement of the pay of teachers in *Burma* could not be carried out owing to lack of funds, but it was hoped to introduce the new scale at the close of the quinquennium. An important change has been the transference in that province of all expenditure upon Anglo-vernacular and European schools to provincial funds. Rapid progress has been made with the scheme formulated in 1911 for the *Central Provinces*. Each district headquarters save one has been provided with a government high school or an aided school accepted as its equivalent. The pay of government teachers has been improved by their inclusion in the subordinate service. A large increase in the amounts devoted to grant-in-aid has assisted the expansion of municipal and aided

* The policy in the Central Provinces is to some extent an exception. While it would relieve district councils of charges for English education, it contemplates the maintenance and even the expansion of municipal secondary schools provided that this is without detriment to the claims of primary education.

schools. The number of scholarships was increased. It remains to convert district council schools into government institutions. This will complete the essentials of an arrangement which was intended to mark the limits of direct responsibility on the part of government, and, while expanding government activity up to those limits, to give greater facility for local and private effort to undertake further expansion. In the *North-West Frontier Province* municipal schools were taken over by government and funds were thereby set free for the development of elementary education by the municipalities.

In *Bombay*, the *United Provinces* and the *Punjab* schemes aiming for the most part at the improvement of the prospects of teachers were largely carried out during the previous quinquennium. Further developments have been along the lines then laid down.

211. There are left *Bengal, Bihar and Orissa and Assam.* In Bengal the number of secondary schools and pupils is very great. In those provinces (especially in Bengal and Assam) secondary education is run at a remarkably cheap rate. Finally, they were affected by the territorial redistribution of 1912. These causes have combined to delay action. In 1908 a committee had met in Calcutta and had formulated extensive schemes for the schools situated in these areas. The main features of the scheme were, as regards government schools, the provision of posts in the provincial service for headmasters of high schools (save at divisional headquarters, where there would be headmasters in the Indian educational service), the inclusion of teachers of English and classical languages in the subordinate service and the formation of a vernacular teachers' service; and, as regards privately managed schools, the increase of grants so as to bring a larger number of institutions upon the aided list and to raise the maintenance of a standard aided high school (*i.e.*, one with single-section classes) to ₹540 a month and of an aided middle English school to ₹145 a month, one-fourth of the additional cost in the former case and one-third in the latter being met from private sources. The schemes were calculated to cost 16 lakhs recurring for Bengal (which then included Bihar and Orissa) and 10½ lakhs for Eastern Bengal and Assam, as well as large capital sums. The Government of India criticised the cost involved and the large part which it was intended to assign to government in the financing of privately managed institutions; and they held out no hope of assistance from imperial funds. The local Governments accordingly made minor changes in the schemes; and, as no money was available, the matter rested there. The policy of imperial grants afforded hope that something at least might be accomplished; and in 1912 the local Governments were invited to resubmit their proposals as modified in the light of the administrative changes. The government of *Bihar and Orissa* was the first to respond, with a scheme calculated to impose on government an additional annual outlay of ₹3,86,000. This was sanctioned by the Secretary of State and a beginning has been made, principally in the increase of grants to privately managed schools. The government of *Bengal* submitted their scheme in August 1916. It provides for an increase of provincial expenditure amounting to ₹11,80,020 a year. It had not yet been sanctioned when the quinquennium closed. Both these schemes were amalgamations and adaptations of the schemes proposed in 1908, with only slight modifications. The Administration of *Assam* went further. First, it was decided to transform high schools at sub-divisional headquarters into government institutions, to enlarge government high schools by the opening of additional sections, to encourage the establishment of middle English schools in order to relieve the pressure on the lower classes of high schools, to increase grants-in-aids, etc. In pursuance of this scheme, eight sub-divisional schools were provincialised and a ninth (already a government institution) was raised to the high standard, the double-section system was introduced wherever required in government high schools, and the list of aided high schools was enlarged. At the same time some improvement of staff was effected along the general lines laid down in 1908. Second, an exhaustive scheme was submitted in 1916 to the Government of India. Among its principal features are the reorganisation of the subordinate service and the regularisation of posts already created for new government high schools, the opening of additional high schools, the financing of middle English schools by government, a more liberal provision for scholarships and the experimental

introduction of English as an optional subject in some middle vernacular schools. This last proposal was sanctioned. As the administration is unable to provide funds for the others, they are at present in abeyance.

212. Thus there has been considerable activity in the framing and realisation of schemes. Nevertheless, as a result of the unprecedented demand for secondary education, there have been complaints in the press and elsewhere regarding insufficient accommodation, and various remedies, such as the removal of restrictions on the size of classes, have been suggested. In the United Provinces the complaints were held to warrant the appointment of a committee, whose enquiries showed that the inadequacy of accommodation had been greatly exaggerated and that in the majority of schools accommodation is actually in excess of the demand. As this conclusion has not been accepted by some, it has been decided to keep lists of rejected boys for investigation. The Central Provinces report states that, though candidates for admission are turned away, statistics have not been procured and it is improbable that many who are really fit for secondary education fail to get it. Nevertheless there is considerable overcrowding in places and the problem of further expansion has to be faced. It is probable that in some places there is a defect and in others a surplus of facilities. Distribution is defective and proceeds on no reasoned plan. The location of new schools is not always decided on good grounds. A report on Calcutta schools states that individual motives come into play in the establishment of institutions and that there is sometimes no realisation of the fact that a particular area is already overcrowded with high schools. The Punjab report mentions the influence of sectarian rivalry and points out that little is gained by a community which maintains two ill-staffed schools when its needs could be met by one efficient instituton. *Complaints of inadequate facilities.*

213. In *Madras* and *Bombay* government has prescribed 40 and 35 pupils respectively as the maximum limit of a high school class or section of a class; in Bombay the rule applies to middle schools also. In *Bengal, Bihar and Orissa, Burma* and *Assam* the limits are laid down by the University of Calcutta—50 pupils in the top two classes of a high school, 40 in the next four and 30 in the lower classes. In the *United Provinces* the limit is 30, with an additional 10 per cent. for occasional absences. The *Punjab* Government has laid down 40 as the maximum of a section in any standard. In the *Central Provinces* high classes are limited to 30 and 35 in government and aided schools respectively and middle classes to 35 and 40. The Madras report speaks of the difficulty produced by the admission of a few additional boys whose number would not warrant the opening of a new section and the number of relaxations which have to be allowed. *Restrictions on size of classes.*

The number of pupils per teacher is a different matter from the number of pupils in a class. For the whole of India, it is 20. The lowest figure is 18 in the United Provinces.

No limit is ordinarily placed on the size of a school. The average for India is 154, and in the case of high schools alone it is 327. The Madras report speaks of schools with upwards of 1,000 pupils and in Bengal this figure is probably exceeded. In the Central Provinces 600 has been laid down as the maximum. In Assam it is considered that a double-section school containing 640 pupils represents the maximum desirable.

214. The qualifications and conditions of service of the staff of secondary schools differ according as those schools are managed by government, by local bodies or by private agencies. Among the teachers of English and of the classical languages in schools for Indians the qualifications are as follows. *Qualifications of teachers.*

	Total No. of teachers.	No. of trained teache s.	No. of graduates.
Government schools	3,085	1,746	1,431
Board and municipal schools	2,720	1,194	404
Aided schools	16,904	4,797	3,600
Unaided schools	8,561	341	1,881
TOTAL	32,170	8,078	7,316

The percentage of trained teachers to the total number of teachers was 24·4 in 1914-15, and in 1916-17 it was 25·0. The percentages vary from 1·3 in Bengal to 58·8 in the Punjab, 63·6 in Madras and 86·2 in Burma.

215. Among points of special improvement to be noted are the following. In Madras the staffing of the lower forms and of incomplete secondary schools has improved, but the qualifications are still unsatisfactory. It is rare to find a graduate teacher in a form below the fourth. In Bombay none but graduates are now appointed as teachers in government secondary schools. In the Punjab the percentage of trained teachers has risen from 54 to 65, and the rate of pay which they can command shows that their presence is now considered necessary on the staffs of privately as well as publicly managed schools. In the Central Provinces graduates are employed with very few exceptions in the high departments and matriculates or holders of the school leaving certificate in the middle; the percentage of trained teachers has risen from 11 to 24.

The training of teachers of oriental languages is admittedly defective and their ignorance of English is sometimes a handicap. Their pay is often very low and their methods stereotyped and old-fashioned.

The teachers of vernacular in secondary schools are generally men who have gone through the usual vernacular training institutions. It is remarked in Assam that matriculates and others with inferior qualifications had been occupying these posts and that the substitution for these of trained vernacular teachers is an improvement.

Pay of teachers.
(a) in government service.

216. The staff in government schools has benefited from the improvements effected in the various services (see paragraph 129). In the resolution of 1913 the Government of India laid it down as the general policy that a graded service for teachers of English was desirable, with a minimum salary of ₹40 and a maximum of ₹400. Among some of the improvements effected in different provinces are the following.

The minimum pay of assistant (exclusive of special) masters in *Bombay*, raised from ₹30 to ₹40 in 1912, has been further raised to ₹50. The grant of local allowances of ₹50, ₹30 and ₹20 to headmasters and assistant headmasters and mistresses in *Bengal* has already been mentioned in paragraph 129. In the *Punjab* a Bachelor of Teaching ordinarily commences on ₹75 to ₹90 in the subordinate service, the possessor of a senior Anglo-vernacular certificate on ₹55 to ₹70, and the possessor of a junior certificate on ₹35 to ₹50. In *Burma* the old scale existing in schools taken over from municipalities has been found insufficient; an improved scale has been framed but want of funds has prevented its introduction. In the *Central Provinces* the average pay has been raised from ₹65 to ₹85. Undergraduate teachers begin on ₹40 and graduates on ₹60, both rising (the former by grades and the latter by a time-scale) to ₹125, while 40 posts of ₹150 to ₹250 are reserved for special merit. The *Madras* report states that classical and vernacular teachers are the worst paid members of the staff though the grant of subsidies has now enabled the publicly managed schools to increase their pay to ₹20 rising to ₹40.

(b) in private service.

217. The pay of secondary teachers in private employ is apparently lowest in the United Provinces and Burma (₹25·5). But the average is lowered in those provinces by the large number of middle vernacular schools, where teachers are naturally paid less than in Anglo-vernacular schools. It is highest in Delhi (₹57·2). In Bombay, the North-West Frontier Province and Baluchistan it is between ₹48 and ₹49; in the Central Provinces and Madras between ₹40·5 and ₹42·4; in the Punjab and Ajmer-Merwara between ₹37·7 and ₹38·1. In the eastern provinces it is low—₹31·3 in Bihar and Orissa, ₹29 in Bengal and ₹28·6 in Assam.

Improvement has undoubtedly taken place, largely as the result of the imperial grants; but it is often improvement upon an impossibly low scale. It is reported from the *United Provinces* that, thanks to more liberal grants, the pay in aided schools now approximates more nearly to a living wage. In the *Punjab*, a Bachelor of Teaching can obtain from ₹100 to ₹150 in an aided school, a holder of the senior Anglo-vernacular certificate from ₹80 to ₹100; and a holder of the junior certificate from ₹40 to ₹60. In the aided schools of *Burma* pay tends to approximate to the rates on which government gives half salary grants—namely ₹80 to ₹140 for middle school teachers and ₹140 to ₹300 for high school teachers, with charge allowances of ₹20 and ₹40 to headmasters of middle and high schools respectively. The average scale in middle English schools of *Bihar and Orissa* has risen from a range of ₹4 to ₹64 to a range of ₹5 to ₹100; the lowest rate (an exceptional one) still seems strangely inadequate. The average

pay in aided schools in the *Central Provinces* has risen from ₹50 to ₹53 and would be far higher but for the fact that in Berar the average is only ₹34.

These improvements are satisfactory so far as they go. But much still remains to be done. This is especially the case in Bengal. The University of Calcutta laid down the scale of staff required for recognition as ₹50 for a headmaster, ₹40 for the second master and ₹25 for the rest of the staff. The average salary of a headmaster in Bengal is actually ₹90 to ₹100. A trained B. A. requires at least ₹75, and, if he is possessed of disciplinary power, decent physique, etc., he will command ₹100. An untrained B. A. can be got for ₹25, but then he will have some other employment and will probably be a law student. A whole-time B.A., says Mr. Hornell, can be got for ₹40, but such a man is bound to be 'the weakest of his kind, a disappointed man, without energy or physique.' Partly perhaps as a result of the low market value attached to the teacher and partly on account of the meagre facilities for training in this presidency, out of 12,298 teachers of English and classical languages in schools for Indians 160 are trained and 2,468 possess degrees. This means that 1·3 per cent. of the teachers of English and classical languages in schools for Indians are trained in Bengal, against an average of 25 per cent. for India. The cost of maintenance of secondary schools is extraordinarily low. It is an open secret, says the Director, that the salaries which are entered against the teachers' names and for which they sign receipts are not always paid. The teacher must have recourse to other means of livelihood; if the great majority did not earn money by private coaching, they could not subsist, and the whole fabric of secondary schools would collapse; and if all the money spent on private tuition (Mr. Hornell considers that such tuition by a man at least nominally qualified costs double the school fee and generally a great deal more) were available for the schools, the problem of secondary education would be considerably simplified.

Staff in proprietary schools of Bengal.

218. The staff is sometimes particularly bad in proprietary schools—in themselves not necessarily an evil, but unsuitable to India where public opinion is no check and the small fees collected from the pupils do not suffice both to give a return to the proprietor who has risked something and also to support a reasonable staff. The Bengal report tells of such a school in Calcutta which is run by a proprietor, a graduate headmaster on ₹60 and a rector, who is a matriculate on ₹75. This syndicate employs a staff of whom at least six are only matriculates, while five are drawing less than ₹13 a month. The school is recognised by the university.

Pensions, provident funds, etc.

219. Thus the actual pay earned by the secondary teacher is frequently unsatisfactory. Nor are the other conditions of service sufficiently attractive to create a permanent and contented profession. In government and in some board and municipal schools service is pensionable; but even here the pay is often inadequate. The case of the great mass of teachers in private employ is very different, and, in order to induce a good class of men to make teaching their life work and put a stop to the present tendency to desert teaching for practice at the bar or any other opening, greater security of tenure and some provision for old age are necessary. Allusion has already been made in paragraph 131 to the subject of provident funds and to the general scheme which is under consideration by government. In the meantime it is satisfactory to find that some private agencies have already instituted provident funds. Such arrangements are common in European schools, especially those managed by railway companies, and in institutions maintained by large societies such as the Deccan Education Society. In Madras they are fairly common and in the Punjab the quinquennium has seen a rapid increase, with the result that in the Lahore division only seventeen out of a total of 107 secondary schools have failed to establish funds for their staff. In the North-West Frontier Province, too, every institution has its own rules which are approved by the department, 190 teachers contribute, government assists and the institution of the funds is said to have aided substantially towards securing a better type of teacher. In Delhi the two arts colleges and nearly all the high schools have established funds and 102 teachers contribute. In other provinces less progress has been made. In Bombay the practice appears to be rare. In Burma it has not yet been possible

to introduce a provident fund scheme but in district cess schools, municipal schools and aided vernacular schools some of the teachers' posts are pensionable. In Bihar and Orissa apart from the teachers employed by large zamindaries (who render pensionable service) and those in railway schools only 68 private employees are reported to subscribe to funds. In the Central Provinces only 45 out of 427 secondary teachers so subscribe, in Assam only 25 teachers of unaided schools and none from aided schools.

Courses.

220. The importance of the subject of courses demands a separate section. The following features may be noticed. An attempt has been made to render curricula more realistic and practical. Thus, in Bombay, science has been added to the course as a regular subject and its teaching improved by the provision of special teachers and laboratories, drawing is compulsory in certain classes, sloyd has been introduced in certain schools and history and geography courses have been brought up to date. The development of school leaving certificates has favoured elasticity of courses. Science is compulsory in all the high schools in Madras and in the Madras matriculation, and optional in the matriculations of the Punjab and Allahabad. It is also a compulsory subject of study, though not of examination, in schools preparing for the Bombay matriculation. It is an optional subject under the various school leaving certificate schemes. Only in the provinces whose schools prepare for the Calcutta matriculation is science excluded from the curriculum, the nearest approach being elementary mechanics, which is an optional subject.

System of grant-in-aid.

221. A summary of the grant-in-aid systems was given in appendix XII of the last review. The systems fall under several general classes, of which the following are the chief.

(*i*) The amount may be assessed on the income from private sources. In *Madras*, it equals the income from endowments and subscriptions, exclusive of that from fees, and is diminished by any sum spent on scholarships or on meeting the difference between the standard and the actual rate of fees. In *Bengal* the grant may be equal to half, or in some districts two-thirds, of the income from private sources, inclusive of fees. A set of revised rules for the western and the eastern districts is under contemplation.

(*ii*) The grant may be a fraction of the total expenditure. In *Bombay* it is a third; the necessity of raising it to four-ninths has been admitted; but the war has prevented the change. (The grant may also be assessed at one half of the income from local sources.)

(*iii*) The grant may be a definite sum, differing for different classes of schools, or a capitation grant, or a mixture of the two. In the *United Provinces* it comprises a fixed grant of ₹750 a year for the high section of a boys' school, ₹400 for the upper middle, ₹250 for the lower middle and ₹150 for the upper primary; and a capitation grant of ₹3 per head a year. But it may not exceed the private income inclusive of fees, or one-half of the expenditure, or the difference between expenditure and private income.

(*iv*) The grant may be partially determined by the condition of the school—*i.e.*, the difference between private income and a reasonable expenditure, or the qualifications and pay of teachers. The new system in *Bihar and Orissa* permits the grant to equal the difference between private income and ₹535 a month in the case of a high school or ₹160 in that of a middle school. Similarly in *Assam*, according to new rules made during the quinquennium, a fixed scale is prescribed for the number, qualifications and pay of teachers, provision for free studentships, sports, contingencies, etc.; and the difference between this and the fee income at government rates determines the amount of grant. Subscriptions are not regarded in this calculation, but are placed to the credit of the school balance. One of the systems pursued in *Burma* is the ordinary grant—*i.e.*, the difference between income and expenditure, the income being taken to include fees at government rates, grants for technical subjects, salary grants, etc. The salary grant in Burma is given for certificated teachers. It may amount to one-half the salary paid subject to a maximum of ₹150 per teacher. As a matter of fact such grants in Burma ordinarily equal three-eighths of the salary. The system introduced into the *North-West Frontier Province* makes the grant contingent on the difference between the fee income calculated at standard rates and a standard scale of maintenance. In the *Punjab* staff grants are given; they were raised during the quinquennium from a fifth to a third of the salary.

(*v*) Sometimes a fixed grant is given, based on the grant earned under various systems for the past three years. This system is coming to be largely employed in Anglo-vernacular schools in *Burma*.

Several provinces permit of special concessions for schools recently started. Generally, too, the grant is liable to some increase or decrease according as the school is found to be good or poor in point of instruction, discipline, etc.

It will have been observed from this brief description that a mixture of systems is followed in some provinces and that in Burma there is choice between the ordinary and the fixed system. The former was substituted for the results grant system, which was abandoned with some regret in Burma, as it was held to supply a necessary stimulus. It is now being replaced by the fixed grant.

The general tendency during the quinquennium has been to render grant-in-aid rules more generous and to assist schools in the maintenance of a reasonable standard of staff in place of giving them just so much as they can earn through various means or as government can afford.

222. Many high schools have been erected or enlarged in the United Provinces, among which may be mentioned the Meston High school at Ramnagar, built by His Highness the Maharaja of Benares at a cost of ₹90,000. Ten new government secondary schools have been erected in the Punjab, seven hostels attached to government high schools and five attached to aided schools. In Burma 24 new government secondary schools have been built. Ten high schools in Bihar and Orissa have acquired new buildings, 14 have been extended, and 14 provided with play grounds. In the Central Provinces ten school houses, ten laboratories and eight hostels for government secondary schools have been completed or begun, while nine schools and four hostels have been extended. Reports from other provinces, too, record a number of new buildings. *Buildings and type-plans.*

The general subject of buildings has been treated in paragraph 60. A type-plan for *mofussil* schools has been made in Bengal estimated to accommodate 400 pupils and to cost ₹45,000. The plan for government high schools in Bihar and Orissa provides 26 rooms of 19′ by 26′ 3″ and a hall of 65′ × 35′. The building is two-storeyed with the class-rooms in a single line and lighted from the north, on which side there is no verandah. The northern windows take up nearly the whole wall from a height of about 4½′ from the floor. The hall is built out to the south; it is considered to be larger than is necessary. The lighting of the class-rooms is good. Specimens of this building together with a plan of that at Patna, are shown among the illustrations. Type-plans have also been made in the same province for aided high and middle schools. In the latter there are three rooms of 16′ by 20′ in a single row, lighted from the north, and two of 16′ × 15′ projecting to the south.

Another model of buildings worthy of description is that adopted in Burma. It is suitable for a hot climate where the maximum of ventilation is required and for places where it is convenient to build largely of wood. A typical building is two storeyed, containing a single row of class-rooms below and a dormitory for 50 boys with a living room for the superintendent above. It faces north and south. Above the masonry plinth venetians run along the whole length of the building to a height of about 1½ feet. The wall of the ground floor, supported on beams above the venetians, consists of brick-nogging, 8 feet high. There are four large doors to each class-room, two facing north and two facing south. The wall is completely cut away above the brick-nogging, an open clerestorey window 2½ feet high running all round the building broken only by the supports for the first floor. This window, or open strip, is unglazed and filled with wire-netting. Above this again comes the first floor, constructed entirely of wood. One such building costs ₹60,000.

V.—Courses and Examinations.

223. The courses in the middle section are fixed by the local governments. In the high section they are dictated by the examination for which a school prepares. *Different kinds of courses.*

These examinations are of three kinds—(*i*) university matriculation examinations, (*ii*) school final examinations which may or may not admit to a university, and (*iii*) other examinations.

The scheme of matriculation courses ordinarily includes four, five or six subjects, history and geography being generally classed together, save at Calcutta. The Punjab University offers three different matriculations for the faculties of arts, science and oriental studies. Calcutta and Allahabad permit a wide choice of optionals. Madras limits the choice in optionals to (*i*) *Matriculation examinations.*

languages. Bombay prescribes a rigid course of six subjects with no optionals.

English and mathematics are compulsory in all matriculations. The study of a classical and of a vernacular language is compulsory at Calcutta and Bombay. History and geography form a compulsory subject everywhere save at Calcutta, where they figure as two optionals. Elementary science is compulsory at Bombay and Madras and optional elsewhere, save at Calcutta, where science is not prescribed. Drawing is admitted as an optional in the Punjab and Allahabad universities, agriculture at the Punjab and elementary mechanics at Calcutta.

Matriculation examinations are conducted by means of written papers. During the quinquennium the Bombay university dispensed with the examination in certain subjects, but the plan has not been successful (see paragraph 228).

(*ii*) *School final examinations.*

224. The growth of school final examinations was described in the last review. Tests of this nature have existed in India in one shape or another since 1888. They are intended to encourage variety of courses and to supplement the external examination by school records and oral and practical tests.

In *Madras* the subjects of the course leading up to the school leaving certificate are grouped as follows:—'A' subjects (English, vernacular and elementary mathematics) in which all are examined; 'B' subjects (history, geography, science, etc.), which all schools are supposed to teach but in which no examination is held; and 'C' subjects forming a long list of specialised optionals in which examination is held. The examination is conducted by a board, which contains ten members, of whom five are officials and five are non-officials; four of these members are nominated by the university—a new arrangement introduced during the quinquennium; the Director is president. The school record forms an important item. All pupils, whether they pass in the examination or not, receive certificates, the value of which can be judged from the record and the marks. This examination admits to the university and has practically ousted the matriculation. As all candidates receive a certificate, the discretionary power of admitting them to colleges rests with the principals. Owing to the abuse of this power, the university now issues lists of those deemed eligible for admission based on a specified minimum percentage of examination marks in certain subjects. The course for the *Bombay* school final examination is similar to the Bombay matriculation, save that science and a classical language are not compulsory. It admits to government service but not to university courses. The course for the *United Provinces* school leaving certificate examination consists of English, mathematics, the history of India, geography, a vernacular and one optional. The board consists of the Director, the registrar of examinations, five members appointed by government, two nominated by the university, one by the Chamber of Commerce, and one member of the staff of the Thomason Civil Engineering College at Roorkee. The school record, written examinations and an oral and practical test (held at each school by selected examiners) combine in determining the result. A pass qualifies for government service and for admission to university courses. The examination is popular and in 1917 the number of candidates exceeded those at the matriculation. The Anglo-vernacular high school final examination in *Burma* is conducted by the department. Hitherto terminal marks have not been calculated. But a two-years' record is now to be made and sent to the Director. No numerical marks are given at the examination; the candidate simply passes or fails. A pass qualifies for government service and also, if taken in all compulsory subjects and two optionals (one of which must be Pali or mathematics) for admission to the Calcutta University courses. The Director considers that this involves an undue restriction of choice. Here also, in 1917, the number of candidates exceeded those for matriculation. A majority of candidates take both examinations. In 1913 a committee framed a scheme for *Bihar and Orissa*, but it has been postponed pending the establishment of the Patna University. A school final system was introduced in the *North-West Frontier Province* during the quinquennium; it is recognised for admission to the Punjab University. A scheme was drawn up for *Ajmer-Merwara* in 1914 and was recognised by the University of Allahabad; but, owing to the lack of adequate inspecting staff, its introduction has been postponed.

An important incident of the period has been the consideration of a form of examination in Bombay and the Punjab which should be conducted by a joint board representative of government, the university and other interests. The arrangement would differ from the systems in Madras and the United Provinces mainly in giving greater prominence to the university. In Bombay it would supersede the present dual system.

225. Under other examinations may be mentioned first those of a general kind, such as the high school examination for European schools and the Cambridge local examinations. These latter are taken by European schools in some provinces and also by the English-teaching schools of Bombay. A few schools for Indians now present pupils at them; *e.g.*, a centre for Indians was established in 1916 in Bombay, sixty-eight candidates appeared and five passed. These examinations are ordinarily accepted by universities as admitting to their courses. *(iii) Other examinations.*

There are also examinations which close special or vocational courses of school study. Madras has a system of government examinations. In Bengal 'B' and 'C' courses were established in 1901, to provide for intending engineers or those who would pursue a business career or become clerks. The latter course failed at an early stage, as it appeared to offer no special advantages. The 'B' classes were kept alive, but are now pronounced by Mr. Hornell to have been a failure; and of classes attached to ten high schools in Bengal five closed during the quinquennium, and two have closed in Bihar and Orissa, though the class at Bhagalpur has increased and is reported to be doing excellent work. Such examinations do not admit to university courses.

226. The numbers in the different provinces who appeared for the matriculation and the school final in 1916-17 were as follows. *Figures of examinations.*

	Matriculation.		School final examination.	
	Candidates.	Passes.	Candidates.	Passes.
Madras	13	1	5,437	5,434
Bombay	3,941	1,370	1,168	529
Bengal	11,515	8,414	..	..
United Provinces	2,454	680	2,655	1,288
Punjab	5,269	3,560	..	..
Burma	545	282	549	278
Bihar and Orissa	3,070	1,894	..	..
Central Provinces and Berar	1,682	425	1,000	531
Assam	711	515	..	..
North-West Frontier Province	198	125	159	109
Other Provinces.	450	224	102	33
Total	29,848	17,490	11,090	8,202

This table does not include examinations in European schools. With the addition of candidates at these and at other examinations which close the high school course, the total of those who appeared was 42,047 and of those who passed 26,271. The figure of passes at the Madras school leaving certificate merely means that so many certificates were issued; there is no distinction of pass and fail.

227. Some of the reports, notably those from Bengal, the Punjab and Assam, point out the defects of the matriculation examination and contain a chorus of disapproval from inspecting officers both European and Indian, while several of the resolutions of local Governments speak of its cramping influence. The Director in Bengal points out the absurdity of high school students spending their time on preparation for a course of study upon which the majority of them will not enter. It is a fact that the matriculation course, which is specially adapted for the needs of the student who will proceed to a university, is pursued by most of the 216,160 pupils who read in the two, three or four high classes; and yet only 29,848 appear for the examination and 11,090 at the school leaving certificate examination. In 1915-16, 21,405 pupils passed the matriculation or the school final. In 1916-17, there were *Merits and defects of different kinds of examinations.*

13,946 students enrolled in the 1st year of arts colleges. Nor is the influence of the examination confined to pupils of the high classes. Mr. Südmersen says that the evil of early specialising affects the lower classes of the school. Thus, despite a certain choice of optionals, the examination has a narrowing effect on the curricula of schools. Little or no attention is paid to subjects, however important, unless they figure in the matriculation course. The effect of this is particularly marked where, as at Calcutta, history and geography are not compulsory and science not even an optional. Still more serious is the effect upon the general life of a school, the methods pursued, the discipline and the tone. For none of these things count in a purely external examination. One of the Punjab inspectors says, "The pass-percentage fetish and the university examiners' demand for brief answers in set forms continue to hold their sway over the teacher and the taught." Hence cram and the use of keys are encouraged. Prescribed text-books are begun too soon. Mr. Hornell, speaking of books issuing from the Calcutta University press, says that teachers have attempted to introduce these books in the high schools at too early a stage, and that unfortunately the texts hitherto issued have been seriously defective. One of the Bengal inspectors says that "it is notorious that the matriculation, as it is held now, is lowering the standard of education in high schools." Another writes, "It is felt throughout that the matriculation certificate is not a proper test of the intelligence and capacity of the candidates and that still less is it a test of the quality of the teaching given." Mr. Südmersen speaks as follows.

"The matriculation examination affords no test of the power of the candidate to understand spoken English, and its test of the power of writing English is very unsatisfactory. The low percentage of pass marks required enables a boy to get through in English in spite of bad spelling and composition, and this is the case too in mathematics, where a knowledge of the four elementary rules with a memory retention of a few propositions in Euclid will secure a pass. The memorising of a few passages of translation and of a few stock answers in grammar will enable him to satisfy the examiners in Sanskrit."

The result produced by the fact that recognition for matriculation remains the chief aim was observed in a previous report from Bengal. So long as this is the case, advice on teaching methods or suggestions of improvement are not likely to receive due attention.

Such are some of the main comments made in the reports. Yet another comment is the large scale on which these examinatons have now to be conducted in respect of numbers both of candidates and centres. The number of Calcutta matriculation candidates in 1916-17 was 16,088, and the number of centres 52. The valuing of so large a number of papers presents grave difficulty. The danger of leakage grows with the scale on which the test is conducted. Just about the close of the quinquennium, during the summer of 1917, twice in succession the Calcutta matriculation papers leaked out and the examination had to be held a third time under the conduct of an officer lent at the university's request.

228. Criticisms of the school final certificate have for the most part been aimed at two peculiarities of the system in Madras—the granting of a certificate to every candidate and the list of important 'B' subjects on which no examination is held. Neither of these characteristics is essential to the preservation of the principles which underlie such systems. The acceptance of certificates, without examination of their contents, as evidence that the holders are fit to pursue a university course, will be remedied by the minima of examination marks laid down by the university and the inclusion of its nominees upon the board. The fact that no examination is held in such subjects as science, history and geography has led to their neglect. Mr. Stone, however, is against their inclusion in the examination and hopes that other means which are being taken will work improvement—especially the threatened withdrawal of recognition from schools which neglect the subjects or fail to take them into account when promotions are being made. At the same time there is no doubt a decided feeling in India against taking the teaching of subjects on trust. Thus, the important change made in 1913 in the Bombay matriculation, whereby vernaculars, science and geography were omitted from the list of examination

subjects, has given rise to dissatisfaction and will probably be modified. The inclusion of non-examination subjects is an ideal but probably incapable of realisation save where the arrangements for inspection are complete.

The real difficulties involved in school final certificates are the following.

First, the inspecting or examining staff is sometimes too small to conduct the oral and practical tests and generally keep the schools up to the mark.

Second, there is danger of a teaching staff, unaccustomed to such responsibility, submitting records which exaggerate the virtues and attainments of pupils. This no doubt happens in some cases; and in the beginning some risks must be taken, checked so far as possible by the results of inspection and oral tests. But the report from the North-West Frontier Province says that the marks given by teachers agree to a remarkable extent with those assigned by the inspectors and that any deviation from the standard is in the direction rather of severity than of undue leniency. A third stumbling-block in the path of reform is the idea, entertained or professed in some quarters, that government desires to limit higher education and is using the school leaving certificate as a means to this end. Any intelligent study of facts and figures would show that, were such the intention, a more unsuitable instrument could hardly have been chosen, since its effect is to improve teaching and thus fit a larger number for higher studies.

229. For there can be no doubt of its beneficial results. One of the Madras inspectors summarises these as consistency of work throughout the year instead of spasmodic efforts made as the examination season approaches, greater attention paid to practical work and physical training, better control on the part of the staff and freedom in the choice of subjects. One of the inspectors in the United Provinces points out that the best boys join the school leaving certificate classes, while the matriculation classes attract those whose chances of success are slender. He states that the assumption that the qualification for government service conferred by success at the examination is the sole or main cause of its popularity casts a slur upon the ideals and aspirations of Indian parents which is wholly unmerited.

"From a personal familiarity (he proceeds) with the views of many Indian parents I have no doubt in my mind that they are being daily impressed with the superiority of the school leaving certificate examination in so far as it insists upon a training which is not assured in the matriculation examination. The two features of the school leaving certificate examination which make a powerful appeal to the sympathy of the Indian parent are (1) the comparatively practical nature of the training imparted, the result of which is tested by the *viva voce* examination *in situ*, which must in the nature of things be more satisfactory than a mere written examination test and (2) the influence which records of the work done in school exercise upon the final verdict of success or failure of a student. The latter characteristic is particularly appreciated as it relaxes the rigidity of a public examination and imparts to it an elasticity which renders it possible to let through a boy who has worked well at school but through some mishap has not succeeded in attaining the required standard at the final examination."

Other inspectors observe that the school final constitutes a more perfect test than the matriculation, gives headmasters a chance of making recommendations which are based on the general conduct and tuitional work of the candidates and ensures the possession of a larger stock of general information. Mr. de la Fosse says that the experience of the last five years is all in favour of the examination. The Burma Director points out that the high school final is not merely an external test, since the examiners know the schools, understand the conditions under which they work, and consult the records of candidates. He also shows by the percentage of passes that the standard is much less variable than is the case with the matriculation. The Director in the North-West Frontier Province notes, among other advantages, that the school final scheme has induced habits of neatness and accuracy and has raised the standard of teaching in colloquial English in response to the oral test. He says that the experience of the last two years has fully justified its introduction.

Middle School examinations.

230. Middle school examinations were abolished at the beginning of the century, though a middle vernacular examination is permissible as marking the end of the school course for a boy who will not attempt English, and a test at this stage may also be used for scholarship purposes. Two provinces however

have retained the middle English examination. The Government of Burma considered that a test which qualified for certain grades of government service should continue to be a public examination and that it was necessary to keep a uniform check on admissions to higher stages. The examination has survived in Ajmer-Merwara also. The abolition of the middle English examination is condemned by some practical educationists who date from it a steady deterioration in the quality of high school work.

VI.—Methods

Science.

231. Perhaps the most important change in method has been the improvement of science teaching. This subject is compulsory for the Bombay matriculation, though not as an examination subject, and for the few who take the Madras matriculation; and it is taught in schools which take the Madras school leaving certificate course. Bombay has now an inspector of science teaching; and effective instruction in this subject dates from the last four or five years. A curriculum, text-books and teachers' manuals had first to be prepared. The subjects thus treated were studies of matter and life for the lowest classes, then physiology and nature study, then physiology and hygiene, then physics and hygiene, then physics and mechanics and finally chemistry and first aid in the highest class. The next thing was to plan and build laboratories and design furniture. The supply of suitable apparatus made (as the inspector considers essential in the interests of economy) in India, is still under consideration. As to the object of the instruction given, the inspector says that the amount of knowledge of physics and chemistry acquired by the Indian school boy cannot be very valuable in after-life; so these subjects are regarded as purely educational. A knowledge of hygiene, on the other hand, is regarded as an end in itself, while physiology explains its facts. Nature study is intended to increase the power of observation, stimulate interest and increase knowledge. As to method, individual practical work has been made the basis of the scheme. A list of simple, inexpensive and definite little experiments was drawn up, for performance by each boy. Then came the final step necessary for the starting of the scheme—the training of teachers for instruction in science, which was carried out at four centres and is reported to have been very successful. The whole scheme has hitherto cost over ₹85,000 capital and nearly ₹4,000 recurring for laboratory expenses.

Action has been taken elsewhere to render science more practical. Practical tests were made compulsory for the Madras school leaving certificate in 1914 and for the United Provinces certificate in 1909. The teaching of science in the Punjab high schools is based on experiments. Altogether the position of science in schools has entirely changed since the Universities Commission of 1902 made their unflattering report upon it.

English.

232. The direct method of teaching English has been introduced on a large scale, especially in Madras, Bombay and the Punjab. In the first of these provinces it is complained that the method is not well employed by teachers of the lower classes, that grammar is neglected and that questions are couched in bad English. In the United Provinces, the direct method may be used only by competent trained teachers.

Mathematics.

233. Mathematics, like English, is often poorly taught in the lower classes. The Madras report speaks of carelessness, lack of method and untidiness; so long as the answer is correct, the teacher does not mind how it is obtained.

History and geography.

234. The teaching of history and geography suffers from the teacher's habit of lecturing and the pupil's of taking a mass of notes. History lessons, too, are often treated as though they were merely English lessons. An inspector in the United Provinces considers that wider reading is required on the part of the teacher to enable him to make the subjects more vivid; and that correlation between them is unknown.

Handwriting.

235. Writing receives little attention. One of the Bombay inspectors remarks that slovenly writing is still far too common. "I attribute it in part," he says, "to the use of rough note-books, in which boys scribble all day long, and I have tried to suppress them." In European schools, on the contrary, writing is particularly good and the work in these schools "is usually a revele-

tion to an Indian visitor." A Bengal inspector attributes the small amount and badness of written work to absence of high benches, absence of ink, dirty unruled exercise books, and failure to insist on correction, etc.

236. A general difficulty regarding method is created by the organisation of work among the staff. The better qualified master considers it undignified to teach the lower classes. Again, it is reported that schools cling to the subject teacher even in the lower standards, " with the result that small boys go to one teacher for copy-writing, to another for mathematics, to a third for history, geography and vernacular, and to a fourth for English, to say nothing of the drawing and science teacher. In the lower classes the practice is not due to attachment to the subject teacher but to the employment of cheap teachers with slender qualifications who can be trusted with only a limited number of subjects." *Organisation of class work.*

Mr. Hornell complains that class teaching is sacrificed to individual coaching, that a teacher who has never seen any decent class teaching cannot be expected to instruct fifty boys at once and that the following is typical of what is happening in at least ninety-five per cent. of the recognised high schools of Bengal.

" The class is usually arranged in the form of a square and the teacher sits in the middle. The cleverest boys sit nearer the teacher. The teacher sits and gives one long continuous lecture to the class, of which the boys, as a rule, take no notes, nor indeed do many of them listen. If he goes to the black-board he stands with his back to the class, and explains things to the black-board. If he is questioning the boys or hearing work he walks round the inside of the square. He stands opposite one boy for anything up to ten minutes, he will hear that one boy read and address all the questions to that one boy with his back to the rest of the class. When that one boy is finished with, he goes on to the boy next to him. There is no idea of class teaching. It is a system of individual tuition applied successively to forty or fifty boys. It follows that, even if the teacher distributed his favours evenly, each boy would do only one minute's work in a period. As a fact the teacher confines his attention almost entirely to some five or ten boys, and gives very occasional recognition to some ten others. The rest never get taught at all. * * * * * * *
The real truth is that such work as is done is not done in school. Nearly every boy in the school has a private tutor. Those who have not, are hopeless ' back benchers ' who simply do not count. Early in the morning and in the evening after school these tutors go through the boys' lessons in English and mathematics, possibly also Sanskrit. They give individual tuition in just the same way as they give it in the school. The English teachers of the school have private pupils. Many English knowing employés of local businesses and offices have private pupils. Elder brothers sometimes act as tutors. All the real work in the real subjects is done at home. At school the boy merely strolls through the day. The ' real subjects ' mean English and mathematics. These two subjects are set apart in the annual tests. If a boy passes in these all is considered well, for failures seldom occur in any other subjects in the matriculation. There is an extremely drastic system of ' moderation,' and it appears to be recognised that if a boy does well in English and mathematics, he will not, except for extreme badness, be plucked in any other subject. Whether this idea is wholly justified or not, I am unable to say. It is certainly fairly generally believed."

237. The question of the use of English as the medium of instruction has come to the fore during the quinquennium. A resolution was moved on the subject in the Imperial Legislative Council, when it was stated that local Governments would be consulted after the war. After the close of the quinquennium a conference on the subject was held in Simla. The present position is shown in the diagram which faces page 81. In Madras, where English is permitted as the medium only in the three highest classes, an attempt to substitute the vernacular in those classes is reported to have encountered difficulties; it was seriously made only in one institution and was then abandoned. There is a fairly general desire to use English in the lower classes, but it is opposed by the department. In Bombay, where the use of English as the medium is permitted in the four highest classes, the utilisation of the vernacular in all subjects other than English has now been recommended in all standards, and questions in history, geography and the classical languages at the school final examination may be answered in the vernacular. Headmasters have welcomed the change in the two lower of the four high school classes; but in the two higher opinion seems to incline in favour of the reten- *The medium of instruction.*

tion of English, especially as the university does not recognise the vernacular as an alternative medium of expression at the matriculation. Only about 10 per cent. of the candidates at the school final examination have chosen the vernacular for examination purposes, and though it seems probable that questions are better answered in the vernacular, the data at present hardly permit of a definite conclusion. During the quinquennium the vernacular was made the medium throughout the middle classes for all subjects save English in the United Provinces, the Punjab and the North-West Frontier Province.

General remarks.

238. On the whole, reports indicate that methods of teaching have improved during the quinquennium. But much remains to be done. The teacher, even when trained, is inclined to talk too much and make his pupils do too little. Interest is not sufficiently aroused, systems of marking or place taking are little employed, accuracy and neatness are not emphasised.

VII.—Wastage in schools.

Wastage.

239. Now that figures of the pupils enrolled in different classes are available for 1912 and 1917, it is possible by a calculation of the probable figures for the intervening years, to form a more accurate estimate than formerly of the process of wastage in schools. The figures of Anglo-vernacular schools however are not distinguished from those of vernacular in general table X, and there is a certain amount of overlapping in the middle stages. It is better therefore to adopt the figures of a single province, where the high school classes can be accurately distinguished. Bengal has been selected for the following illustration. In that province there are four high school stages. This is advantageous, since it enables a clear comparison to be made with the results of an enquiry into the same subject in the United States of America, made by Mr. E. L. Thorndyke and Mr. L. Bevier.* This comparison is instructive. The numbers of students who proceed in subsequent years to the higher classes and the examination results are given as percentages of the number of those who enter the high school stage in a single year.

		Class I.	Class II.	Class III.	Class IV.	Successful at final examination.
American schools.		100	63	44.4	30	not stated
Bengal schools . . .	1911-12 Entries .	100	107	104	108	32
	1912-13 do. .	100	102	89	96	35
	1913-14 do. .	100	93	82	89	39

In America there is a violent drop after the first year in the high school, which Mr. Thorndyke regards as most unsatisfactory and as evidence that a large share of the fault of elimination lies with the kind of education given. Other possible reasons for this early decline in numbers are the discovery that the pupils are unable to face the course or that the parents desire to put them into some form of vocational education. Whatever be the cause, it is clear that a number of children are removed from the high schools of America at an early stage. In Bengal on the other hand not only is such removal rare but in the years 1913, 1914 and 1915 the numbers in classes 2, 3 and 4 (the highest class being denominated 4) are actually greater than those who entered class 1 in 1911-12. The reason for this is that classes beyond the first are swollen by those who fail to get promotion in previous years, although the tendency to refuse promotion would seem to have decreased in a remarkable manner in the succession of years beginning 1912-13 and 1913-14. In America the numbers are reduced to 30 per cent. by the time the highest class is reached. In India there is no substantial reduction throughout the high standard and it is left to the examination (easy as it is admitted to be) to weed out anything from 60 to 70 per cent. of the pupils.

* The Elimination of Pupils from Schools, by E. L. Thorndyke, Bureau of Education, Washington, and The Educational Review, June, 1915.

It is interesting to pursue the investigation into college classes. Here it is possible to give the figures for all-India.

		Class I.	Class II.	Class III.	Class IV.	Graduates.
American colleges		100	78·2	64·6	60·2	59·1
Indian colleges	1911-12 Entries	100	106	56	89	52
	1912-13 do.	100	113	54	86	54
	1913-14 do.	100	113	54	83	45

The same phenomena are apparent here, save that in this case the intermediate examination serves as an eliminating agency in the middle of the course. The numbers in Indian colleges are accordingly greatly reduced in the third year but are again inflated by the failures of previous years in the fourth year with the result that those successful at the intermediate in 1914 and those who graduated in 1916 represent precisely the same percentage of those who entered on their university studies in 1912-13.

The general upshot is that in India the process of elimination is involuntary and is effected by external examinations. In the United States elimination is voluntary or if it is effected by any discriminating process, the process must be constantly at work through the advice of teachers or the conduct of periodical tests.

VIII.—General results.

240. No doubt a solid improvement has taken place in secondary education. There are many successful and efficient schools and in some provinces there is no lack of vitality in the teaching. But the note of pessimism, observed in former reports, is dominant. Mr. Mayhew says that examination results alone show that the work of secondary schools is appallingly bad and that in some respects there has been deterioration. The Bengal report exhibits a still gloomier state of affairs. *Defects of secondary education.*

241. Apart from special causes, such as inadequate staff, poor pay, overcrowding, defective discipline, and others which tend to depress the standard of secondary education, there are two underlying matters of which these are largely the phenomena. *Causes.*

242. In the first place the apparently inexhaustible demand for secondary education, combined with the difficulty of meeting it in an adequate manner, tends to swamp the effects of reform. Existing schools are improved; but new ones spring up, lowering the average of attainment and undermining discipline. One of the Bengal inspectors, speaking of Calcutta, says that owing to the demand for any education, however bad, proprietors are able to manage their schools at the lowest limit of inefficiency without fear of loss of boys. The most necessary ingredients of education, such as discipline, social life, good physical conditions and a reasonable standard of class-work, are not demanded and therefore not supplied. Boys are able to bargain with school managers for concession rates of fees, permission to accumulate arrears and certainly of promotion. The Madras report says that schools up to or over 1,000 pupils are not uncommon, with each form and class divided into several sections and that in such schools it is found that organisation, supervision and efficiency are sacrificed on the altar of fee-income. The effect of all this upon discipline and efficiency of teaching is noted in some of the reports. The school often depends upon the good will of parents and pupils, and, where public opinion is weak and uniformed and parents are only too ready to listen to the complaints of their children, the school boy becomes the master of his teachers. Faults are condoned and promotion from class to class is demanded under threat of withdrawal. Unwise promotion, says Mr. Mayhew, accentuates the result of defective instruction, hampers the progress of each class by the dragging weight of inefficients and eventually clogs the matriculation class with an increasing number of hopeless cases. (*i*) *Difficulty of meeting the demand.*

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(ii) Effect of external examinations.

243. In the second place, there is still in some provinces the numbing influence of the matriculation. This affects the school in several ways. The majority of schools in such provinces still, as Mr. Hornell remarked in an earlier report, acknowledge no law and submit to no supervision or guidance other than that which the matriculation imposes on them. It is impossible that a syndicate sitting in Calcutta should control 789 schools distributed over an area of 78,699 square miles. Rules become relaxed, orders are evaded and the influence of the inspecting staff is weakened. Again, those effects are produced which have already been observed in connection with the curriculum and the method of treating it which is inevitably adopted when the sole end in view is the passing of a maximum number of pupils through an external examination. Nor is it only the curriculum which is narrowed. Scant attention is paid to those activities which ought to form so important a part of the pupil's environment. At a time of life when action is natural and essential to well-being the boy is forced into sedentary application to a course which often makes little appeal to him and in mastering which he receives but little assistance, while his chief recreation is frequently the perusal of highly spiced newspapers. Mr. Mayhew says, "What impresses the careful observer most unfavourably is the limitation of the school horizon, the lack of suitable interests and the general dullness of school-life. The schoolboy has few hobbies and is stung to alertness only by a reference to examinations or local politics. There is no reaction to the mention of Indian names renowned for industrial enterprise, administrative ability, scholarship or sport. But a reference to any well-known political leader seems to arouse in him the spirit of romance and adventure which is so natural to boyhood and is only awaiting absorption in a more appropriate sphere." Finally, owing to the arrangement whereby the high school course leads up to a test which is designed to be the portal to a higher stage of instruction, the school tends to lose its proper place in the organisation. What is wanted is a course both of studies and of other activities sufficiently broad to suit the temperament of different boys in the higher stages and to fit all not merely for further studies but also for a career. Instead of this the matriculation, as remarked by Mr. Südmersen, is a point of departure rather than a terminus. High school education comes to be regarded as a preparatory stage rather than as an end in itself. This condition of things reacts not only on the schools but also on the colleges. Mr. Hornell has suggested that it is essential to the university as a place of higher education that it should abandon as soon as possible all work which is not both by its nature as well as in its standard the proper work of a university. The work of the schools should be widened and their standard raised so as to relieve the earlier stages of the college. When this has been done, continues Mr. Hornell, the school final stage would almost certainly come to be regarded as the point on the educational ladder at which boys go off not only to clerkships but also into lower grades of specific professional training. A system is required which will prepare for life and not only for a matriculation examination.

244. When this has been said, it is necessary to reiterate the fact that there has been improvement and that in many places schools will be found where a healthy training is imparted. This is particularly to be observed where a better scale of pay has been given to teachers, play-grounds have been provided and games organised and a rational system of school leaving certificates has been introduced.

CHAPTER IX.

PRIMARY EDUCATION.

I.—General.

245. The main feature of primary education in India is that it is (with certain exceptions noted in paragraph 284) education in the vernacular. It is imparted mainly in primary schools, the instruction being sometimes continued through middle vernacular classes. In most provinces Anglo-vernacular secondary schools, too, impart primary education to the pupils in their lowest classes. The organisation of primary schools and of the primary stages of secondary schools is shown in the diagram facing page 81. Elementary education is also given in certain other schools, such as special schools for artisans, some private institutions, etc. *Organisation.*

During the quinquennium a change was made whereby a certain number of institutions, formerly classed as *maktabs* and *pathshalas* but in reality imparting primary instruction in the vernacular, were transferred to the head 'primary schools.' As however the introduction of the ordinary subjects of instruction into those indigenous schools has not necessarily deprived them of their other characteristics (such as the teaching of the Koran, etc.), their number is also shown separately in appendix XI.

246. Primary schools are regarded as mainly the care of local bodies, which both maintain and often aid such schools. Government schools number only 1,353; schools managed by local bodies 39,172; aided schools 85,353; and unaided 16,325. *Management.*

The tendency is for the number of board schools to increase, for aided schools to become transformed into board schools and for unaided schools to find a place upon the aided list. Though there are many exceptions, the privately managed primary school of the teacher-manager type is not efficient. Many of them, says the Madras report, are ephemeral in character, ill-staffed, ill-housed and ill-equipped. The teacher-manager depends upon his grant and payment from parents partly in money and partly in kind and often ekes out a precarious living as a stamp vendor, petition writer and in various other capacities which are apt to interfere with his teaching duties. Under the board school system the school attains stability and the appointment of better qualified teachers is assured. The Bombay report speaks of the popularity of this system. The education given is better and the fees charged are considerably lower. Similar opinions are expressed in other reports. The general popularity of the board school is evident from the fact that it contains on the average nearly 61 pupils while the aided school contains 35 and the unaided school 26. A board primary school for boys costs on the average an annual sum of Rs. 368·6, an aided school Rs. 143·7 and an unaided school Rs. 61·6.

247. Nevertheless the number of privately managed primary schools still largely exceeds the number of those under board or municipal management. The board school forms the mainstay of primary education in Bombay, the United Provinces, the Punjab, the Central Provinces, Assam and the North-West Frontier Province. There are also many board schools in Madras, though less than a third of the number of privately managed schools in that presidency. In Burma there are no boards and therefore no board schools, all primary schools in the province save three being aided. In Bengal and Bihar and Orissa the government had in the past depended wholly upon privately managed schools. In 1907 a beginning was made in Eastern Bengal with the establishment of board schools which would be of a more permanent character and would give better education. The policy has now been introduced into western Bengal and the presidency contained, in 1916-17, 2,809 board primary schools for boys as against 25,700 aided and 3,959 unaided. In Bihar and

Orissa also a modest commencement has been made with the establishment of board schools. In 1911-12, there were only 109 such schools in the province. There are now 318 as against 16,085 aided and 5,628 unaided.

It will be observed from paragraphs 265 and 267 that in these two last-named provinces surveys have been or are being undertaken and that in Bengal the establishment of board schools has formed an integral feature of a more thorough and equable distribution of institutions. One of the chief advantages of board schools is that they can be established where required, whereas (says Mr. Jennings) a teacher in search of a stipend is not likely to start a school in a backward area, where he will get little from the fees, when he can open a school near to one already in existence and attempt to draw pupils away from it.

Committees.

248. The attempt is generally made to constitute managing or visiting committees for primary schools. This can more easily be done where the system is one of board schools, but is difficult where schools are private ventures. In Bombay such a committee generally consists of the village headman and a few others and its work is to enlist sympathy for the school, secure attendance and check any vagrancy on the part of the master. Under the new circle scheme in the United Provinces, Circle Committees have been appointed. Though it is early to judge, the opinion seems to be that they are not of much value save where definite duties are assigned them. The formation of such committees is laid down in the Assam Local Self-Government Act of 1915. Mr. Südmersen says that they have not yet been able to rise above factious contentions and that any interest manifested in the school is the outcome of personal antipathies rather than of educational enthusiasm. "The burning down of the school house and thefts of school material are not unknown results of village factions and the school *pandit* is often by no means unwilling to take a prominent part in the maintaining of these feuds." In Bengal and Bihar and Orissa, where the aided system prevails and the few board schools which exist are a novelty, such committees generally exist only in name.

II.—Figures of institutions and pupils.

Figures for all-India (primary schools).

249. The total number of primary schools in India for boys and girls, has risen from 123,578 to 142,203 or by 15 per cent., that of pupils in them from 4,988,142 to 5,818,730 or by 16½ per cent. There are 124,081 boys' schools with 5,188,411 pupils, and 18,122 girls' schools with 630,319 pupils. The figures for boys' schools are elaborated in supplemental tables 85, 86 and 89.

Distribution of boys' schools.

250. There is one boys' primary school for every 4·3 towns or villages, as against 5·3 in 1911-12. The number of towns or villages per school varies from 1·9 in Madras to 9·9 in the United Provinces and 10·6 in the Central Provinces (see supplemental table 87). But, as remarked in the last review, owing to differences in the organisation of villages, this calculation offers a defective criterion of distribution. One boys' school serves 8·3 square miles (see supplemental table 88). If educational institutions of all sorts be taken, the number of square miles so served is 5·4. There is one educational institution for every 1,266 of the total population, and one boys' primary school for every 1,005 of the male population.

Average enrolment. compared with increase (boys' schools).

251. The average number of pupils in a boys' primary school (see supplemental tables 90 and 91) is now 42 as against 41 in 1911-12. (If girls' schools be included, the average enrolment is 39.) It is interesting to consider this in connection with variations in the number of schools and in the percentage of pupils under instruction. The following table brings these points together.

	Average number of pupils in a boys' primary school.		Percentage of increase or decrease in average number.	Percentage of increase or decrease in total number of boys' primary schools.	Percentage of increase or decrease in number of pupils in boys' primary schools.
	1911-12.	1916-17			
Madras	39	43	+10·2	+ 20·1	+30·9
Bombay	58	59	+ 1·7	— 16·9	—15·2

	Average number of pupils in a boys' primary school.		Percentage of increase or decrease in average number.	Percentage of increase or decrease in total number of boys' primary schools.	Percentage of increase or decrease in number of pupils in boys' primary schools.
	1911-12.	1916-17.			
Bengal	38	36	— 5·3	+ 13·9	+ 8·0
United Provinces	52	62	+19·2	+ 13·8	+35·1
Punjab	53	50	— 5·7	+ 43·9	+36·9
Burma	34	33	— 2·9	+ 42·5	+37·9
Bihar and Orissa	28	28	·0	+ ·79	+ ·97
Central Provinces and Berar	75	73	— 2·7	+ 15·7	+12·4
Assam	41	44	+ 7·3	+ 11·5	+20·6
North-West Frontier Province	54	43	—20·4	+125	+77·6
INDIA	41	42	+ 2·4	+ 12·1	+14·7

The falling off in Bombay and the insignificance of the increase in Bihar and Orissa are explained in paragraph 39. The increase in the number of schools in Madras, the United Provinces and Assam has been accompanied by a solid increase in the average enrolment and by a more than commensurate increase in the number of boys at school. In other provinces the increase in the number of schools has indeed produced an increase of pupils but not to the same degree. In the Punjab and Burma, where the number of new pupils is large, it has been purchased by a creation of new schools proportionately three times greater than that which in the United Provinces has produced an almost equal percentage of increase in pupils. In Bengal the percentage of increase in pupils is quite incommensurate with that in schools. In Bengal and the Punjab there has been a serious fall in the average enrolment.

252. The average daily attendance in a boys' primary school is 32·5 pupils or 80·9 per cent. of the average monthly enrolment. It is far the best in Burma, and lowest in Assam (71·9 per cent.). *Attendance (boys' schools).*

253. The distribution of pupils in boys' primary schools among different races and creeds is as follows. *Pupils by communities (boys' schools).*

Race or creed with male population.	Number of pupils in boys' primary schools.	Percentage of the male population in boys' primary schools.	Percentage of increase or decrease among pupils in boys' primary schools.
European and Anglo-Indian (172,753)	2,790	1·6	+56·2
Indian Christians (1,128,802)	132,385	11·7	+16·0
Brahmans (6,137,401)	504,347	7·6	+ 6·9
Non-Brahmans (77,102,556)	3,025,436	3·9	+11·2
Muhammadans (29,881,399)	1,146,664	3·8	+24·0
Buddhists (5,247,177)	203,905	3·9	+38·9
Parsis (44,541)	4,050	9·1	— 6·2
Others (5,159,062)	168,592	3·3	+22·0
TOTAL (124,873,691*)	5,188,169	4·2	+14·7

Europeans and Anglo-Indians are educated mainly in secondary schools. Hence the percentages of those at school and of increase possess little significance. The large increase among Muhammadans is noteworthy.

* General Table I gives 124,747,805.

Figures for all-India (pupils in primary stage).

254. Hitherto the figures given have dealt with primary schools, mainly those for boys. It is clear however that such figures do not represent the total undergoing primary instruction. Pupils in primary departments of secondary schools should be added; and there are also, as has already been remarked, a certain number who receive such instruction in elementary private schools which teach a vernacular. The total thus arrived at is as follows :—

	Boys.	Girls.	Total.
In primary stage of public schools .	5,288,708	1,115,492	6,404,200
In elementary private schools teaching a vernacular	325,925	17,976	343,901
Total .	5,614,633	1,133,468	6,748,101

The total in 1911-12 was 6,007,196. In that year pupils in ' other public schools' were included. This is an uncertain figure; and one of the advantages of the reclassification of *maktabs* and *pathshalas* already alluded to is that it largely dispenses with the necessity for this heading in the computation of children undergoing primary education. The increase during the previous quinquennium under these heads had been about 1,300,000 pupils. In the present quinquennium it has apparently been only just over 740,000. But in 1914-15 some 300,000 pupils of Native States were excluded from the returns. If allowance be made for the proportion of these who would naturally be in primary classes, it will be found that there has been an increase among primary pupils amounting to over a million. In British India 2·8 per cent. of the population are undergoing elementary education, namely 4·5 in the case of boys and ·95 in that of girls.

Distribution by provinces (boys in primary stage).

255. The number of boys undergoing elementary education in the different provinces, the percentage of increase or decrease and the percentage on the total male population are shown below.

—	1911-12. Boys in primary stage of public schools.	1911-12. Boys in elementary private schools teaching a vernacular.	1911-12. Total.	1916-17. Boys in primary stage of public schools.	1916-17. Boys in elementary private schools teaching a vernacular.	1916-17. Total.	Percentage of increase or decrease.	Percentage of boys undergoing elementary education to the total male population.
Madras . . .	867,951	62,612	930,563	1,118,626	57,630	1,176,256	+26·4	5·77
Bombay . . .	635,953	29,359	665,312	534,019	11,233	545,252	−18·0	5·31
Bengal . . .	1,203,599	3,842	1,207,441	1,302,952	2,582	1,305,534	+8·12	5·58
United Provinces .	509,398	40,856	550,254	656,551	30,446	686,997	+24·9	2·80
Punjab . . .	239,330	17,635	256,965	309,211	15,883	325,094	+26·5	3·01
Burma . . .	177,150	166,150	343,300	244,555	177,721	422,276	+23·0	6·82
Bihar and Orissa .	597,251	24,715	621,966	605,632	25,696	631,328	+ 1·5	3·74
Central Provinces and Berar.	259,337	..	259,337	282,012	41	282,053	+ 8·8	4·06
Assam . . .	146,325	415	146,740	177,570	450	178,020	+21·3	5·13
North-West Frontier Province.	20,826	572	21,398	31,816	464	32,280	+50·9	2·73
Minor Administrations	3,981	..	3,981	25,764	3,779	29,543	..	3·34
India . . .	4,661,101	346,156	5,007,257	5,288,708	325,925	5,614,633	+12·1	4·50

The decrease in Bombay and the apparent lack of progress in Bihar and Orissa are due to the exclusion since 1913-14 of the figures of certain Native States—a change which has affected the figures in other provinces as well, though not to the same extent. If the figures of Bombay Native States be excluded for 1911-12, the increase in primary schools in that presidency is 951 and of pupils in primary stages 63,125. The report from Bihar and Orissa points out that in some districts the increase has not been continuous and that some actually show a decline during the last year of the quinquennium. Among the reasons assigned for this, it is stated that, when increased rates of stipend were sanctioned for teachers, a number of venture schools were encouraged to start operations, but closed down when

it was discovered that the boards had not sufficient funds to assist them. It is hoped that the imperial grant of 1917-18 will relieve boards and bring about an early increase. The Director in the Central Provinces remarks that, while the increase in pupils is smaller than in the previous quinquennium, that in the number of schools is slightly larger—a fact which shows that schools are being extended to localities where the demand for education is not so strong. The increase of 70 per cent. among pupils in public primary schools of the North-West Frontier Province is remarkable.

III.—Expenditure.

256. The total expenditure on primary schools of all kinds has risen from ₹2,07,26,145 to ₹2,93,13,545 or by 41·4 per cent. Expenditure on boys' primary schools has risen from ₹1,79,62,453 to ₹2,51,57,789 or by 40·1 per cent. Figures for different provinces are found in supplemental tables 97-101. *Total expenditure (primary schools).*

257. The following table gives some figures which have bearing on the paragraphs which follow. The letters above the columns indicate the following :— *Percentages of expenditure in provinces.*

A. Percentage of direct expenditure on all primary schools to total direct educational expenditure.

B. Percentage of direct public expenditure on all primary schools to total direct public expenditure on education.

C. Average total direct expenditure on a boys' primary school.

D. Average direct expenditure per pupil in a boys' primary school.

E. Average direct public expenditure per pupil in a boys' primary school.

F. Average direct expenditure from public funds on boys' primary schools per head of the male population.

—	A	B	C	D	E	F
			₹	₹	₹	₹
Madras	45·7	63·2	203·8	4·9	3·5	·21
Bombay	50·8	66·6	556·8	9·3	7·7	·43
Bengal	25·4	35·2	117·1	3·5	1·5	·07
United Provinces	30·0	42·8	248·1	4·5	3·9	·09
Punjab	28·3	40·2	321·8	6·8	5·7	·12
Burma	22·6	26·2	127·3	3·9	2·6	·09
Bihar and Orissa	47·0	49·2	112·2	4·3	2·0	·07
Central Provinces and Berar	47·4	54·3	387·0	5·4	4·9	·19
Assam	42·9	55·1	178·7	4·2	3·6	·17
North-West Frontier Province	32·0	42·5	291·5	7·2	7·0	·14
Minor Administrations	25·6	22·2	597·2	10·6	6·4	·16
TOTAL OR AVERAGE	37·0	34·0	202·8	5·0	3·6	·14

These figures are important. They illustrate the low proportion of expenditure on elementary, as compared with other forms of education, for India as a whole. In partial palliation of this fact, it is to be remembered that the figures do not include expenditure on pupils undergoing primary education in secondary schools. This consideration explains the abnormally low figure in the case of Burma, where the number of boys in middle vernacular (which are largely elementary) schools actually exceeds that in primary schools. Secondly, they show the difference which exists between provinces in the cost of a school and of a pupil. The contrast between Bombay and Bengal is remarkable and arises from the fact that in Bombay the primary teacher is tolerably well remunerated.

Sources from which expenditure is met (primary schools).

258. The sources from which the expenditure on all primary schools is derived are the following.

	Amount contributed in		Percentage to total direct expenditure on primary schools in	
	1911-12.	1916-17.	1911-12.	1916-17.
	₹	₹		
Provincial funds	45,28,767	68,99,307	21·8	23·5
Local funds	64,03,477	1,12,61,945	30·9	38·4
Municipal funds	16,94,424	27,41,090	8·2	9·4
Fees	42,20,990	47,73,768	20·4	16·3
Endowments	38,78,487	4,67,972	18·7	1·6
Subscriptions, etc.		31,69,463		10·8
TOTAL	2,07,26,145	2,93,13,545	100·0	100·0

The increase in the amount spent from local funds is largely due to contributions made from provincial revenues supplemented, as these have been, by imperial grants. The lessening of the proportion borne by fees is a matter for congratulation.

Imperial grants.

259. The increase in expenditure is largely due to imperial recurring grants given for primary education, amounting to 66 lakhs. Non-recurring grants were also given for this purpose.

Fees.

260. The average annual fee for a pupil in a primary school for boys is shown by provinces, periods and different kinds of management in supplemental tables 107 to 109. The present average for Indians for the whole of India is 14·5 annas. The sum is highest in Bengal (₹1·7), and lowest in the Central Provinces (annas 0·9). In the North-West Frontier Province and Assam primary education is free. The average annual fee in a school under public management is $7\frac{1}{3}$ annas, in an aided school ₹1·2, and in an unaided school ₹1·4. Further information about fee rates in different provinces and the remission of fees will be found in paragraph 298.

Average cost of a school and of a pupil.

261. The average cost of a boys' primary school and of a pupil has been shown by provinces in paragraph 257, it is shown by periods and by different kinds of management in supplemental tables 102-103.

The average cost of a boys' school is ₹202·8, varying from ₹557 in Bombay to ₹117 in Bengal and ₹112·2 in Bihar and Orissa and from ₹553 in a government and ₹368·6 in a board school to ₹143·7 in an aided and ₹61·6 in an unaided school.

The average annual cost of a pupil in a boys' primary school is ₹5·0, varying from ₹9·3 in Bombay to ₹4·9 in Madras and ₹3·5 in Bengal. The cost of a pupil to public funds is ₹3·6.

IV.—General developments.

Main objects of policy.

262. The objects to be aimed at in fostering elementary education are the provision of facilities within easy reach of every child and the continuation of the child's education to a stage at which he may be regarded as permanently literate.

(i) Expansion.

263. When the circumstances of the quinquennium are considered, the increase of pupils, though smaller than could be desired, compares not unfavourably with the preceding period.

Surveys.

264. It is important, both for the general increase of literacy and for ensuring that facilities are not confined to certain communities, that the expansion of primary education should proceed upon a definite plan. The action taken towards this end in three provinces is described below.

265. In the last review a scheme of survey for eastern Bengal was described. The idea was to provide each *panchayati* union with a decent primary school. Where a good upper primary school existed, this was to be regarded as the union school. The number of unions thus served was 1,033. Elsewhere, board lower primary schools were to be started. During the previous quinquennium 1,340 such schools had been started, with buildings constructed at a cost of ₹7,77,000 or ₹509 each. During the quinquennium under review, 1,213 more such schools were established with buildings costing about 9 lakhs, or ₹742 each. Thus, out of 4,701 unions in eastern Bengal, 3,586 have been provided in one way or another. (a) *in Bengal.*

After the constitution of the presidency of Bengal, it was decided to extend the system to western Bengal. It was found that 1,447 unions had upper primary schools, including 150 schools with good buildings transferred to district boards. A beginning was made in the remaining unions with the erection of 100 new schools at an initial cost of one lakh, or ₹1,000 each. Out of 2,879 unions in western Bengal, 1,547 have thus been provided with schools.

In the whole of Bengal as now constituted there are 7,580 unions. It remains to provide board primary schools in 2,447 of them.

One of the objects of the scheme was the establishment of schools of a permanent type with teachers on a reasonable remuneration in place of poor and often ephemeral *pathshalas* where the *guru* could earn only a bare pittance. A still more important object was the distribution of schools on an intelligible system and in such a manner as to give every locality the chance of education. A union averages 10·4 square miles; so that, provided rivers do not intervene, each child should be able to go to a union school for at least part of his education, even if, in the case of some villages, the infants must content themselves with a small local institution. The original scheme did not claim to depend wholly on union schools but contemplated a net-work of aided institutions; it was intended 'to supplement, not to supplant, the aided system.' Mr. Hornell remarks that the scheme has not contributed to the expansion of education, some of the schools being existing institutions, which have been transferred to board management, and that it absorbs a good deal of money,* but that its merits are considerable and that it should certainly be continued.

266. The survey recommended by the Piggott Committee and adopted by the Government of the United Provinces depended on the main suggestion of that committee—that a school carrying primary education up to its highest stage (class IV) should be placed within the reach of every child. The province was to be divided into circles, each of approximately 25 square miles. In each circle there was to be a full primary school, ideally of 200 boys, and any incomplete primary schools in the circle were to be regarded as feeders to it. It is characteristic of the practical difficulties inherent in any broad organisation of this nature that, when the schemes were prepared, they were found to adhere too closely to the letter of the resolution and none appeared entirely satisfactory. Their realisation would have led to the abolition of many schools opened in answer to a real local demand and it was feared that they might discourage the legitimate ambition of lower primary schools to become full primary schools. Hence the distribution was revised and, while the main principles of the scheme were preserved, the proposal to aim at concentrating 200 pupils in the central primary school before other schools within the unit could be allowed to aspire to the upper primary standard was definitely abandoned. The scheme took effect in 1916-17, though not to its full extent. It is thus too early to speak of its results; but there was an increase of 30,000 boys in primary schools that year and the report says that from the point of view of numbers there can be no question that the scheme has been generally successful. But it is not yet proved that its main object—the continuance of a larger number of pupils to the close of the full primary course—is being attained. Though the percentage of pupils in the upper primary classes to the total in vernacular schools increased during the quinquennium from 10·1 to 12·8, there was an actual decline in the last year. It is thought that this decline is due to temporary causes. (b) *in the United Provinces.*

267. In 1916-17 the Government of Bihar and Orissa issued instructions for the preparation of programmes of expansion by district boards. The object in view is to bring the percentage of children at school to those of a school-going age up to 50 where it is now below 25, to double it where it is between 25 and 40 and to raise the figure to 75 or 80 in other cases. It is calculated that in order to allow of children attending school easily, each infant school should serve 2½ square miles, a lower primary school 10 square miles and an upper primary school 25 square miles. The idea is to open the additional schools necessary for making this distribution and to concentrate where the distances between schools are less than those specified and physical conditions permit. (c) *in Bihar and Orissa.*

268. The object aimed at in these three schemes is much the same—the provision of a good central school for each unit area, with a network of other

* It was considered in Eastern Bengal and Assam that the scheme did attract more pupils to school, as the new board schools were more efficient; and during the quinquennium 1907—12, the percentage of increase among pupils in boys' primary schools in Eastern Bengal and Assam was 25·6 against 16·8 in Bengal. As regards cost, the amount spent on annual maintenance of a board or municipal school for boys in Bengal was ₹198, and in the whole of India nearly ₹369 in 1916-17.

schools for the small children serving, so to speak, to connect the central schools with one another. It is indisputable that such schemes should result eventually in placing education within the reach of all and increasing the number of pupils. Whether they will accomplish the equally important task of inducing boys to proceed to the higher classes is more problematical.

(ii) Continuation of studies.

269. For whatever limited success may have attended the efforts to make elementary instruction more widespread, no solution has yet been found for the equally important problem presented by the early abandonment of studies, although such a solution is one of the objects of the schemes just described. The figures of distribution of boys over the various stages of elementary education in both primary and secondary schools are as follows.

	Total number in each stage.	Percentage to total in	
		1911-12.	1916-17.
Boys in upper primary stage	588,207	12·5	11·1
Boys in lower primary stage reading printed books*	3,295,834	62·1	62·3
Boys in lower primary stage not reading printed books*	1,404,667	25·4	26·6
TOTAL	5,288,708	100	100

In a period when increase has been large, a disproportionate number in the lower classes need cause no apprehension. But the year 1916-17 closed a period during which expansion was slightly less than in the preceding quinquennium, and yet it shows a rather less favourable result than was attained in 1911-12. Regarding this—the greatest crux in the whole question of elementary education in India—further remarks are made in the sections on the school course, the education of those in employ and school age and literacy.

Qualifications of teachers.

270. Apart from a very small proportion of government employees the teachers in primary schools are either in board, municipal or private employ.

Out of 219,667 teachers in primary schools 65,818 are trained. The distribution is as follows.

	Total number of teachers.	Number of trained teachers.
Government schools	3,313	2,084
Board and municipal schools	82,770	40,667
Aided schools	115,725	21,855
Unaided schools	17,859	1,212
TOTAL	219,667	65,818

The percentages of trained teachers to all teachers in primary schools of different provinces are shown in the foot note.† Among the larger provinces, the Punjab and the United Provinces give the best figures, with 52·2 and 40·6 per cent. Bengal comes last with 15·7 per cent.

The general qualification which admits to training is ideally the middle vernacular certificate, and this is coming more and more to be the reality; though there are many teachers who have passed only the upper primary standard. In Bengal there are still a number of teachers, amounting to 10·2 per cent. of the whole, who have passed only the lower primary examination.

*The phrases 'reading' or 'not reading printed books' are misleading if literally interpreted. The Indian parent does not believe his child is properly at school till it possesses a book, however elementary. The second category may be taken as indicating the rudimentary stages—mainly the lowest infant class.

† Madras 36·2; Bombay 37·8; Bengal 15·7; United Provinces 40·6; Punjab 52·2; Burma 18·2; Bihar and Orissa 20·7; Central Provinces and Berar 32·2; Assam 38·4; North-West Frontier Province 37·8; Coorg 62·5; Delhi 51·8; Ajmer-Merwara 26·6; Baluchistan 53·0; Bangalore 47·0; India 29·9.

271. The average rate of pay given to a primary teacher in each province is as follows. *Pay of teachers.*

	Board schools.	Municipal schools.	Aided schools.	Unaided schools.
	R	R	R	R
Madras	10·7	12·4	7·2	5·2
Bombay*	15·2	16·7	15·9	
Bengal	9·3	11·2	6·6	
United Provinces	7·7	10·5	5·4	
Punjab	14·9	16·8	15·9	
Burma†	24·6		12·5	..
Bihar and Orissa	10·9	11·6	7·1	
Central Provinces	12·2	14·5	10·4	
Assam	9·0	16·6	9·6	2 0
North-West Frontier Province	12·0	20·8	15·2	13·6
Delhi	18·6	19·4	16·5	
Ajmer-Merwara	..	15·1	14·6	
Baluchistan	28·4		24·9	

The method by which these rates are fixed and the progress made in the quinquennium are shown below.

In publicly managed schools in *Madras* the minimum pay of a trained teacher has been raised from R8 to R10, and other modifications are proposed. In aided schools, instead of a general grant rate of R36 a year for each teacher, this rate is now given for an untrained teacher, R42 for a trained teacher of the elementary lower grade and R48 for a trained teacher of the higher elementary grade. Here and in some other provinces women teachers are paid at a higher rate. The list of backward classes having been enlarged, teachers can earn a larger capitation for their enrolment, and inspecting officers can recommend increases in grant up to 50 per cent. for good work. At the same time, among teacher-manager schools, the reductions of grant for bad work have been far more numerous than the enhancements for good work, and in a number of cases grant has had to be entirely withdrawn for fraud. Generally speaking the emolument earned by a teacher-manager is about R6. In *Bombay*, a teacher is paid according to the rate to which his certificate of training entitled him—though it was only during this quinquennium that funds were made available for giving the full rates. These are, for a first year trained teacher R12 rising after 20 years to R25, for a second year trained teacher R15 rising to R40 and for a third year trained teacher R20 or 25 rising to R60. In *Bengal* the average pay in publicly managed institutions ranges from R8·7 in Chittagong division to R18·5 in Calcutta, the average being R12, that in privately managed schools (which constitute the vast majority) from R6·7 to R10·5 in the same divisions, the usual average being about R7·5. The minimum pay of a teacher in the *United Provinces* used to be R8, no maximum was fixed, and the minimum tended to become the maximum. The Piggott Committee recommended grades from R14 to R20 for headmasters and R10 to R15 for assistants and teachers of branch schools. Though effect has not been given to this, the minimum for a trained teacher is now R10, for a headmaster R12 and for a holder of a vernacular teacher's certificate R14. For untrained teachers R8 or 9 is recognised as sufficient. But the average for a board school is still shown as R7·7 and for a privately managed school as R5·4. In the *Punjab* no certificated headmaster in a board school receives less than R15 and no assistant less than R12 and the majority of boards have introduced time scales up to R25 or R30 for headmasters. In *Burma* the pay is higher than elsewhere. A certificated elementary teacher draws pay varying from R15 to R60, certificated assistants R10 to R30, teacher-managers R$7\frac{1}{2}$ toR30 as well as fees and maintenance or result grants; and approved but uncertificated teacher-managers R5. Temporary salary grants of R8 to R30 a month are sometimes given to certificated teacher-managers to enable them to tide over the first two years of school management. In *Bihar and Orissa* the stipends at the beginning of the quinquennium were on a

* The figures for Bombay have been calculated from appendix III to the report for that province. They do not agree with those given on page 65 of the report.

†There are no board schools in Burma. The schools included under this heading are presumably Cess Fund schools.

scale varying in accordance with the qualifications of the *guru* from ₹2 to ₹7 as minima. The committee which discussed primary education in that province advised a scale for trained teachers of ₹7 to ₹12 but government desired ₹9 to be regarded as the minimum, save in special cases. The Director puts the average total emolument at about ₹7·6—namely, ₹3·6 in an unaided school, ₹8·8 in an aided school and ₹13·9 in a board school. In the *Central Provinces* the position of board school teachers has been greatly improved by the rule that the service of all certificated men shall be pensionable—a reform which involves a minimum salary of ₹11. The pay of all uncertificated teachers has been raised to ₹8. An average cadre pay rising from ₹15 to ₹19 has been fixed as an aim to be attained as early as possible. The average pay in the case of government, board, municipal and aided schools has risen from ₹14, 11·2, 13·1 and 9·8 to ₹20, 12·9, 14·5 and 10·4, respectively. In *Assam* the annual emolument in a board school has risen from ₹8·9 to ₹10·7, that in a privately managed school from ₹9·6 (aided) and ₹2 (unaided) to a general average of about ₹8·8 (nearly ₹12 in an aided and ₹4·7 in an unaided school). In the *North-West Frontier Province* the average monthly pay in board, municipal and aided schools has risen from ₹11·5, ₹16·5 and ₹13·1 to ₹12, ₹20·8 and ₹15·2. A decline has occurred in unaided schools. An elementary teachers' service has been instituted and a time-scale from ₹14 to ₹20 has been decided on. In *Delhi* the minimum pay of a qualified headmaster is now ₹18 and that of an assistant ₹15.

Though the pay of teachers in some provinces is still poor enough, the solid improvement which has taken place during the quinquennium is one of its most satisfactory features. When set forth in detail, the increases seem small. When regarded in bulk, they constitute a reform involving heavy expenditure. The large inequalities noted are due partly to economic conditions, partly to differences in the educational systems.

Emoluments in addition to pay.

272. The pay shown above is supplemented in various ways. In many privately managed schools and even in some board schools the teachers are allowed to take the fees. Occasionally some limit is prescribed of the amount which may thus be appropriated.

The primary school master is sometimes also the branch postmaster and as such draws an allowance, generally from ₹2 to ₹10 a month. Such cases however are not very numerous; 640 are reported in Madras, 673 in Bengal, 199 in Bihar and Orissa, and in the Punjab one-sixth of the total number have this additional employment. The arrangement is a convenience to the villagers and a help to the ill-paid teacher. It is apt slightly to interfere with school work, but only in villages where postal work is heavy.

Cattle-pounds, sanitation and cattle-registration are sometimes entrusted to village teachers; the allowance for a pound is ₹1 to ₹2 a month, and that for the other duties from ₹2 to ₹3½.

The Bengal report discusses the question whether the primary teacher receives gifts in kind and presents in money, and concludes that in urban areas he does not receive these things nor yet free board and lodging. In rural tracts too the custom has died out or is dying, though occasionally non-resident *gurus* get house and food. Sometimes however the teacher receives grain and, on marriages and other auspicious occasions, presents of clothing, etc.

Pensions, provident funds, etc.
(a) In board and municipal service.

273. The practice of permitting board and municipal teachers to render pensionable service or to subscribe to the regular provident funds established by those bodies is increasing. In Bombay and the Central Provinces such teachers render pensionable service. In Bihar and Orissa they can contribute to the board provident funds, and 704 do so; the same privilege is accorded by most of the local boards and municipalities of Assam, and 220 teachers are contributing. In all these cases the privilege applies to those in receipt of pay over ₹10. In the United Provinces contribution is generally compulsory for teachers on ₹10 or over and sometimes teachers on smaller pay are allowed to contribute. In the North-West Frontier Province teachers on ₹10 or over are required to contribute to the board or municipal provident fund; the number of those so subscribing is 649. In Delhi 159 teachers contribute to the fund. The contribution under these funds is generally one anna in every rupee of the employee's pay, to which the local body contributes either an equal amount or half.

(b) In private employ.

274. The teacher in a private primary school is in a particularly unfortunate position as regards provision for old age. He is not ordinarily eligi-

ble to contribute to the funds started by local bodies, and the establishment of a general fund for those in non-pensionable employ would probably fail to benefit some of the teachers on lower pay since under present conditions they could hardly be expected to contribute anything. The only arrangement at present made is the establishment by a few societies of private funds. To how small an extent this practice is carried can be seen from the figures of the Central Provinces where in only 40 out of 1,307 aided primary schools can the teachers look forward to any pension or provident fund benefits.

Number of pupils per teacher.

275. The average size of a primary school (if boys' and girls' schools be taken together) is 39 pupils, and the average number of pupils per teacher is 25. Five years ago, the figures were 38 and 27. In Burma and Bihar and Orissa the numbers of pupils per teacher are 20·5 and 22·6 respectively; in the Central Provinces and Assam 30·0 and 32·5. In the remaining provinces the variation is between 24·6 in Madras and 27·7 in the Punjab. Thus the proportion of teachers to pupils in the primary schools of India is particularly large. It cannot be argued from this that the schools are over-staffed. The fact rather is that they are under attended. As will presently be shown, the teacher is actually unable to cope with the number of classes in a single school.

In the United Provinces it is laid down that there should roughly be one teacher for every thirty boys and that no teacher should take more than two classes. The same recommendation has been made in Bihar and Orissa, though the actual number is much less. The number of classes in a small primary school and the small allowance of teachers which can be afforded form a standing difficulty. Mr. Mayhew remarks of the Central Provinces that thirty pupils cannot be considered excessive, but that a teacher has to take two or three of the higher classes with a small number of pupils, while the lower classes are overcrowded and understaffed. Some further comments on this difficult problem will be found in paragraph 295.

System of grant-in-aid.

276. In Bombay, Burma and the major part of the Central Provinces grants to primary schools form a charge upon provincial revenues. In Bengal, the Punjab, Bihar and Orissa and Assam grants are paid from local funds. In Madras and the United Provinces there is a mixture of these systems.

The manner in which grants are assessed was shown in appendix XVI of the last review. The main characteristics and principal changes are as follows.

Like the grants to secondary schools, those to primary schools are sometimes, as in *Bombay*, calculated upon the receipts and expenditure, sometimes, as in *Bengal*, upon the general condition of the school as indicated by marks made upon test cards at the time of inspection, but most often upon some sort of capitation system combined with a fixed grant given for each teacher. There is a peculiar system in the *United Provinces* under which schools of the upper primary grade aided by government receive a sum of ₹150 a year *plus* an attendance grant, *plus* one-fifth of the salary of each trained teacher; while lower primary schools aided by the boards receive grants which generally vary from ₹4 to ₹6 a-month.

The *Punjab* system is the same as described in the last review—namely capitation grant of ₹2 a year for each pupil in the lower primary and ₹4 for each in the upper primary classes together with a staff grant amounting to one-third of the salary of certificated teachers and monitors. This, though unchanged and though not differing in principle from the system employed in the majority of the provinces, is deserving of mention because it was introduced just at the close of the preceding quinquennium and marked the commencement of a more generous policy. The Director states that the new system has had a marked effect on the increase of aided schools. From 1907 to 1912 there was an increase of only 17 aided schools. From 1912 to 1917 there was an increase of 590. At the same time the enhanced grants have failed in their main object, which was to induce *maktabs, mulla* schools and other institutions of that nature to add some secular instruction to their curricula. On the other hand the higher grants have tempted youths with a smattering of education to open venture schools with results which have not always been very happy.

Any mechanical calculation of grants upon the difference of income and expenditure, the attendance of pupils or the number and qualifications of teachers is liable to be increased or decreased, generally to the extent of 25 per cent., according as the school is found to be in good or poor condition. Results grants however had been abolished before the quinquennium began save in two instances. A system of results grants was maintained in *Burma* as being particularly suitable to the province. The Burma report

states that the manager of vernacular schools has had to rely mainly upon fees which varied very widely according to the locality and upon grants which, so long as they were calculated on the results, might be greatly decreased by causes over which the teacher himself had no control, such as outbreaks of cholera or small-pox or local floods. This points to the desirability of substituting for results grants something of a more permanent nature. The maintenance grant dependent upon the number of pupils in each stage (upper and lower primary) combined with salary grants paid on the qualifications of the staff is consequently coming into greater favour. The second instance was *Assam* where though there was no regular results grant system the amount of assistance earned by a school was partly fixed and partly dependent upon the class in which each pupil was studying. It has now been decided to abolish this capitation system (which obtained both in upper primary schools, which in that province are generally aided schools, and in lower primary schools, which are practically all board or municipal schools); and the rule under which a certain amount of local subscription was required has also been abolished. It is worth while in speaking of Assam to observe that this and Bihar and Orissa are probably the only provinces in which lump grants are given to associations which manage a large number of schools.

In *Bihar and Orissa* grants are given according to the qualifications of teachers—a trained teacher gets ₹9 a month, one who has passed the middle examination ₹6 a month, one who has passed the upper primary ₹3 a month, others ₹2 a month. The new rules for the *North-West Frontier Province* prescribe a maitenance grant comprising ₹8 a month for a school with an average attendance of 40 pupils and, in a school with more than 40 pupils, ₹12 a month for every certificated teacher, and ₹8 a month for every uncertificated teacher.

The principal change has been the abandonment of results grants where they still obtained. Capitation or attendance grants frequently vary in rate according as boys are in the lower or the upper primary section of the school. But this hardly amounts to a capitation system in the sense in which it existed in Assam—especially in view of the fact that a very large number of schools have no upper primary classes at all.

The total amount given from public funds as recurring grant-in-aid to privately managed primary schools increased by ₹25,98,495 to ₹64,12,204 and the amount thus given per pupil in aided primary schools for boys was as follows.

	₹		₹
Madras	2·3	Bihar and Orissa	2·3
Bombay	2·6	Central Provinces and Berar	3·9
Bengal	1·4	Assam	2·7
United Provinces	2·7	North-West Frontier Province	3·5
Punjab	3·3	Other provinces	3·9
Burma	2·6	India	2·0

In addition to this, there are capital grants given for buildings and equipment.

Buildings and type plans.

277. It has already been stated that much progress has been made with buildings. Nevertheless, this subject raises various difficult and even contentious questions. Some would have no buildings for primary schools at all, others would depend on hired buildings. The advocates of special buildings adapted for school purposes are perplexed by the large number to be provided and the difficulty of discovering a type which will not render the total cost prohibitive. Other questions arise regarding the advantages of fairly costly *pucka* buildings on the one hand and cheap buildings demanding constant repair on the other; also regarding the agency to be used for construction.

In Madras only 41 per cent. of the schools are held in buildings of their own. In Bombay the villagers sometimes give houses rent free and adapt them to school purposes; and here, as elsewhere, *chavdis*, *dharamshalas* and temples are frequently used. The Punjab report deprecates the open shelter or shady tree as unsuitable to a climate where dust-storms are not infrequent and the variations in temperature are extreme. In Assam the school buildings are declared to be satisfactory. They are very simple buildings consisting of one long room, with mud floor, walls of the local reeds which there provide so excellent a building material, thatch roof and mat doors and windows.

278. Some progress has been made with type-plans. But the subject presents many difficulties and the type found suitable for one locality often cannot be constructed in another.

Plans for open-air school houses have been evolved in *Bombay*—for a single-master school, containing 40 boys and 400 square feet floor space, ₹1,358 (₹34 per pupil); for a two-master school, containing 60 boys and 600 square feet, ₹2,011 (₹33½ per pupil). The floors of these schools are to be of *murram* (since stone is cold for the children and more expensive). This type of school is deemed unsuitable for Sind. Two standard plans have been issued in *Bengal*, one costing ₹250 to ₹300, and an improved type costing ₹1,000. A type-plan largely used in the *United Provinces* is a deep verandah, divided lengthwise into two portions, generally with a closed room in the corner for maps, etc. Another is a room, with a 10 foot verandah, to which other rooms can be added; each unit accommodates 50 boys and costs ₹1,300. In the *Punjab* it is considered that a decent house can be erected for ₹20 to ₹25 per pupil. A type costing ₹500 per school had been tried in *Burma* without success. The moral drawn is that it is useless to sink money in buildings unless they are substantial and maintained in repair by government, or unless the building can be handed over to a manager who can be trusted to keep it in good condition. Various plans have been published in *Bihar and Orissa*. One, comparatively expensive, comprises two rooms, 18 feet by 24 feet and 18 feet by 12 feet, and a verandah, constructed of brick in clay, costing ₹913 if the roof is of tiles, or ₹1,310 if it is of corrugated iron. Objection was taken to this plan by reason of the facts that burnt bricks are often not available, that the ridge ventilator on the roof often leaked, that it is difficult to find village workmen who can build so large a span as 18 feet, and that the beams for such a span are expensive. Another type provides *kutcha* walls and thatch roof, with two rooms of 25 feet by 12 feet and 15 feet by 12 feet. It costs ₹706, or with one room of 25 feet by 12 feet ₹485. A yet cheaper plan is for a building with dwarf walls and two rooms of 25 feet by 12 feet. This is described as airy and cheap. But it has not been largely appreciated, as the white ants destroy the wooden shutters and the dust sweeps in during the hot months. The *Assam* type-plan provides for the gradual enlargement of a school from the single-teacher institution with a room 28 feet by 15 feet, an extra room of smaller dimensions being added for each class of 30 boys. It consists of a bamboo frame with mat walls and iron roof and is estimated to cost from 14 annas per square foot upwards and ₹1½ if a *pucka* floor is added. Type plan schools in the *North-West Frontier Province* cost ₹1,000 for a single-teacher institution and ₹1,700 for two teachers.

The crux of the problem is that *pucka* buildings are too expensive to erect and *kutcha* buildings too expensive to repair. One possible solution is the acceptance of responsibility for repairs by the villagers. My own experience is that satisfactory buildings can be constructed by the villagers (with financial assistance from the board) out of the same materials which are used for their houses and of somewhat similar design, but adapted to school purposes. Opinion in favour of such an arrangement seems to be gaining ground. The inspector in Sind remarks, "If the villagers could be induced to undertake these repairs, there would be much to say in favour of buildings similar to the ordinary village dwelling houses and costing a few hundred rupees only. The interest in education is not strong enough as a rule to lead the villagers to undertake responsibilities of this nature." Mr. Hornell says that houses are constructed according to the standard plans in Bengal by the local people under the supervision of the district boards. The United Provinces report says it is agreed that repairs and buildings are much safer in the hands of local *zamindars* than in those of contractors.

V.—Courses, Methods and Examinations.

279. Changes in the curricula have not been numerous during the quin- *Courses.*
quennium. In *Madras* and *Bengal* there has been no change whatever, the unification of the courses in western and eastern Bengal is indeed regarded as a matter of urgency and, says the Director, would easily have been accomplished but that a more general organisation, not limited to the primary stages, was deemed desirable. No change has actually taken place in *Bihar and Orissa*, where the western Bengal curriculum is followed; but a new curriculum has been prepared by the primary education committee, to be brought into force in 1918. In *Assam* the course has been completely remodelled. The course followed was that introduced in 1910, when Assam was combined with eastern Bengal. It dispensed as far as possible with text-books and made work dependent upon teachers' manuals and correlated lessons.

It was found to impose too great a tax upon teachers; and a simplified curriculum, restoring the use of text-books, was substituted during the quinquennium. Elsewhere, if there has been alteration, it has been on a small scale. In *Burma* a special course has been adopted for boys who are unlikely to go beyond the fourth vernacular standard. The revision of text-books in some provinces has been of importance, especially in the *Central Provinces.* In that province, too, a more general revision is being worked out, with a view to emphasising the rural side of the work, hygiene, first aid, etc.

280. The curricula aim at instilling a knowledge of the 3 R's. Other subjects are added, with a view to imparting a modicum of knowledge in geography, etc., stimulating thought and observation, and placing the pupil in possession of some practical ability in things which will be of material use to him. A few examples may be cited.

In *Madras* no subject is, strictly speaking, compulsory. The vernacular, space and number work, general knowledge, drawing, singing and physical exercises are recommended for all schools together with the inclusion under one or other of these heads of such knowledge as is particularly necessary for agriculturists; instruction may also be given in English, geography, civics and Indian history, nature study and elementary science, Hindustani or any south Indian vernacular. In *Bombay* the course comprises the 3 R's with Indian accounts, history and geography, object lessons in the lower and science in the higher standards (with drawing in both), with kindergarten methods and story telling in the infant classes and lower standard, drill, gymnastics, etc. In western *Bengal,* besides the 3 R's, drawing and modelling, nature observation, hygiene, poetry and simple geography in relation to actual surroundings are prescribed. Drill, hand and eye training, drawing and further arithmetic and observation work are optional. In the *United Provinces* the subjects are the 3 R's, simple geography and observation lessons with drawing, the reading of leases and patwari's papers in manuscript, account keeping and letter writing. In the *Central Provinces* this utilitarian aspect of the course is still further emphasised.

The differences between curricula for rural and for urban schools are slight and tend to disappear. The main difference now consists in the objects offered for observation lessons. Second languages are attempted only in Madras, where English, Hindustani, etc., may be taught, in the Punjab and the North-West Frontier Province, where Persian is sometimes taken and in Burma, where Pali is studied in monastic schools. Formal agriculture is not taught; but the attempt is generally made to impart an agricultural tinge to the education in rural schools, by insistence on plant and animal life observation, the couching of arithmetic questions in terms of agricultural produce, and sometimes the teaching of land records.

Determining factors in the courses.

281. The problem of primary courses is largely determined by the answer to two questions—What is the teacher able to teach? What is the pupil ready to learn?

(a) Methods.

282. The history of courses in India is an adjustment between the limitations of the teacher and the exigencies of a syllabus which shall not be too jejune. The average elementary teacher possesses neither the knowledge nor the professional skill to do much more than instruct in the 3 R's—often by conventional methods which would not commend themselves to modern ideas. The following passage occurs in a report from Madras—a province where training is well advanced.

"It is not pretended that no advance has been made, but a brief reference to the methods of teaching adopted and to defects commonly met with will force the conclusion that there is much scope for improvement. In number work, merits are that greater attention is paid to mental work, that the training in the earliest stages is made more concrete and that a more practical turn is given to the teaching by homely illustrations and by exercises in local bazar transactions. The main defect is a neglect of space work. Insufficient attention is paid to writing both in the early stages and later when unsuitable copy books are introduced, used wrongly and corrected by faulty methods. As to reading and text-books, in the worse schools it is sometimes found either that the pupils have no books or that all in the same standard have not the same book. Vernacular poetry is unsatisfactory, as often the teachers and nearly invariably the pupils do not understand the passages in their texts. Reading is not nearly as free and fluent as it should be and much more practice in both oral and silent reading is required. Geography is on the whole better taught. More realistic methods are employed, relief maps and other apparatus are used and in not a few schools the causal relation between, *e.g.*, the local rainfall, soil and crops is brought out. Civics is taught in a large

number of schools and a post office scene or representations to the local officials afford popular topics for dramatisation."

In the Punjab, the training of primary teachers is still further advanced than in Madras and the percentage of trained primary teachers is the highest in India. Yet the Director admits that the quality of instruction leaves much to be desired. "Practical subjects, such as nature study, mensuration and land records, are badly taught, while there is little intelligence shown in the teaching of geography and Urdu composition." Any undue strain placed on the teachers' powers leads necessarily to the revision of the courses, as in Assam.

(b) Kind of instruction demanded.

283. The second question involves a consideration of the subjects calculated to keep a boy at school beyond the very short period which he ordinarily devotes to study and which is often too short to make any lasting impression. It may be said broadly that the farmer wants his son to learn one or other of three things or two or more of them combined. These are the 3 R's, and knowledge which will protect him against the landlord, the *patwari* and the *bania*, and (in some cases) an education which will enable him to proceed to a secondary school, get a full education and obtain some small government or clerical employ. Singularly little value is attached to geography, history, observation lessons, hygiene, etc., save in so far as they serve one or other of these objects. Elaborate as some of the courses sound, it is instruction in the 3 R's which is generally wanted and which is actually given. "If one visits a primary school," says the Bombay report, "after previous warning, the infants are probably playing with beads, standard II is making hills, rivers and bays in mud, standard III may be studying flowers, standard IV has a relief map in clay, standard V is drawing a plant, and standard VI is watching a scientific experiment. If one visits unannounced, most of the classes will be poring over books, writing or repeating tables, although one may be engaged on an object-lesson with the object carefully locked up in a wooden cupboard."

The Director in the Punjab doubts if any alteration in the subjects of study in primary schools would have any noticeable effect on school attendance. The agriculturist who sends his son to school regularly does so that he may receive education, by which he understands the 3 R's. If government chooses to add geography and nature study, he accepts them as part of the school routine. It may be desirable to bring the work of a rural school more closely into touch with its surroundings. But no such changes will affect the attendance at rural schools. Indeed, any radical differentiation drawn between the curricula of rural and town schools will affect adversely the attendance at the former, as instanced in the failure of the *zamindari* schools and the unpopularity of lower primary schools which fail to add upper primary classes.

English in the primary classes.

284. When it is said that primary education is education in the vernacular it must be understood that this remark does not strictly apply to such education when imparted in the primary stages of secondary schools. English is occasionally begun before the completion of those stages and in Burma commences in the lowest class. It applies to primary schools. But here also there are exceptions. Out of the total of 5,818,730 pupils of both sexes studying in primary schools 92,584 learn English. The *Madras* report speaks as follows on this subject.

"There is a very general desire for the teaching of English in elementary schools. It is felt that even a smattering has some utilitarian value. This feeling is found even in rural tracts but is stronger and more articulate in urban areas. An English knowing teacher generally gets more pupils for his school than one who has no such knowledge. In most higher elementary schools, English is taught, but the teaching is generally bad as the teacher's knowledge of the language is small. The criteria adopted by the inspecting officers in deciding whether English may be taught or not are the competence of the teacher and the need for the teaching of the language in the locality. It must be confessed that, even where it is forbidden, there is illicit introduction of English out of school hours."

It is in this presidency that most of the English learners in primary schools are found—to the number of 60,253. In *Bombay*, save in a few

isolated cases, English is not taught; but the question of introducing it into the three highest classes of primary schools was mooted during the quinquennium. In *Bengal* it is forbidden; but one of the inspectors remarks that the desire to learn English has developed into a passion justified by the growing importance of the language in everyday life. Hence it is taught on the sly; and parents are prepared to pay high fees for it and, if they cannot secure it, remove their boys from the schools. *Burma* has sixteen primary Anglo-vernacular schools, with 1,370 pupils. The Director says of them, "The Anglo-vernacular primary school *per se* is of little value. Unless it proceeds in the ordinary course to the middle stage or serves as a feeder to a neighbouring middle school it had better be closed. An Anglo-vernacular primary education may be better than no education at all; but if it stops there, the pupil is less fitted to play his part as a good citizen than if he had received a vernacular education." One of the inspectors in *Bihar and Orissa* writes that parents make arrangements with the primary teacher, if he knows English, otherwise with someone else, to have their children taught English. The Director remarks that, while there is a considerable desire for the learning of English, very few schools have teachers competent to instruct in it. Mr. Mayhew, on the other hand, says of the *Central Provinces* that there is no indication that the inclusion of English in the curriculum would make primary schools more popular. In *Assam* there are a number of English-learning primary pupils in the Khasi and Jaintia Hills, where suitable vernacular text-books are rare and even the most rudimentary knowledge of English is prized. In the North Kachar Hills the teaching of various languages, including Kachari itself, has been tried without much avail, and English is now to be the principal school language. During the quinquennium the proposal was made that the eagerness for English education in Assam should be used as a means of spreading vernacular education and an experiment is now to be made in certain middle vernacular schools whereby English will be allowed as an optional subject, the local people bearing the extra cost. English is taught in twelve primary schools in *Delhi*.

Examinations.

285. The examinations which close the primary courses are as follows:—

(*i*) An *in situ* test of an informal character, held orally by the inspecting officer, may take place at the end of the primary stage. This is in the nature of an annual inspection, but certificates are sometimes awarded to the pupils in the highest primary class and promotions from it are decided. This however is by no means invariably so and some provinces have now no examination other than that next to be described.

(*ii*) The full vernacular course, comprising the middle stages, is closed in certain provinces by a more formal examination. This is sometimes called the middle vernacular examination, sometimes, as in Bombay and the United Provinces, the vernacular final. The certificate which is awarded is not without value. In Bombay, for instance, it renders the holder eligible for employment as a teacher in a primary school, admission to the entrance examination of the training institutions or appointment in the lower grades of the public service. This test had been abolished in Assam in 1905-06, but was re-introduced in 1915 under the name of the vernacular school leaving certificate and scholarship examination. It is stated that considerable value is attached to the examination.

(*iii*) Scholarship examinations are held at the close of the primary stage for the selection of scholars during the middle classes. These tests are not generally identical with the *in situ* primary examination (where that is retained); for, as that is held by many officers, it could hardly afford a competitive test. Sometimes, however, the primary test is used as a method of selection for examination candidates. Scholarships at this stage are usually distributed by divisions, districts or sub-divisions. Hence a formal examination is held by the inspector or deputy inspector. In Bombay the inspector holds such an examination for each district. In Bengal there are lower primary scholarships, tenable during the upper primary stage. These are given by district boards and their award is arranged by the boards and the deputy inspectors in consultation. Upper primary scholarships in Bengal, which are tenable in middle schools, are distributed by sub-divisions.

Candidates are selected on the results of the *in situ* test at the annual inspection by the deputy inspectors in consultation with headmasters. The inspector holds examinations of these candidates at various centres. The arrangement is the same in Bihar and Orissa. The scholarships which are awarded at the end of the middle course ordinarily go to the most successful candidates at the vernacular middle (or final) examination.

VI.—Middle vernacular schools.

Organisation of middle vernacular schools.

286. Middle vernacular schools are classed in Madras and Bombay as primary schools, elsewhere as secondary. As regards their character, their intention and their effect, they belong to the primary school system. They are situated in large villages and ordinarily contain all the primary classes and two or three middle classes carrying on the education of those who desire it to a pitch which will enable them to appreciate the literature of the vernacular and imbibe a more advanced knowledge of geography and history than the primary school can afford. These classes are patronised largely by those who intend to become village teachers, provide a good material for this profession and sometimes contain small training classes. They might also, says Mr. Richey, be utilised as the chief vehicle for the diffusion of agricultural education.

Figures of middle vernacular schools.

287. The number of boys' schools is 2,514 with 230,846 pupils. (There are also 296 schools for girls with 30,719 pupils.) This marks an increase (for boys' schools) of 323 schools and 24,776 pupils. Bengal and the United Provinces show decreases of 11,623 and 12,105 respectively in the number of pupils. There have been increases of 28,843, 9,575 and 6,479 in Burma, Assam and the Punjab. Elsewhere the figures have been generally steady with a tendency to increase save in the Central Provinces. Mr. Hornell says of the decline in Bengal that, by reason of the demand for English, the doom of the middle vernacular school is sealed. He notes that this observation, having previously been made in 1848, cannot be taken too literally. The decrease of pupils (accompanied by an increase of schools) in the United Provinces is largely if not wholly accounted for by the complete separation of primary classes, including those which last year were still attached as practising schools, from the middle classes. In the Central Provinces the diminution in the number of schools is due to a policy of concentration, which has been accompanied by an increase of 41·6 per cent. in the number of pupils in the middle stage. The great increase in Assam is no doubt in part due to the abolition of fees in middle vernacular classes. Another cause is the re-introduction of an examination closing the course. A vernacular school leaving certificate has been established in Bihar and Orissa.

VII.—Education of those in employ.

The problem of child-labour.

228. The employment of child-labour in India is wide-spread. It does not necessarily preclude children of very tender years from coming to school. But boys who can be usefully employed are expected to help their parents at times of sowing, weeding and reaping, to tend cattle, do odd jobs about the house, or add to the family earnings by work in factories or on tea-gardens.

Education of children (a) of agriculturists and labourers.

289. Various devices have been adopted to enable the son of the agriculturist and the labourer to help in the fields and yet continue his education. None has been particularly successful.

In *Bombay* a system of rural schools was started in 1911. The course in the rural school was to be of four years, instead of six as in the full primary school, and complete in itself—a good grounding in the 3 R's and a little knowledge of the geography of the district. Schools where the higher standards had been non-existent or only scantily attended were converted into rural schools and the full primary course was confined to larger village schools. The scheme proved unpopular and was discontinued. It was decided that the full primary course should be taught in all board schools, those in the smaller villages being allowed to omit certain subjects; and that in future primary schools should be of two grades, one containing five, the other six classes,* schools in smaller villages being ordinarily of the lower grade but, if local conditions demanded, capable of promotion to the higher. Instead of the rural schools, a new experiment of half-time classes is being tried on a small scale, under which the infants alone attend

*i.e., an infant class and five standards.

for two hours and the other classes for the remaining session or sessions aggregating four hours. But this scheme seems to aim rather at keeping the infants employed and properly taught than at relieving boys for work. In the *United Provinces* the half-time system was made universal for lower primary classes in the Allahabad district in 1915. In some places, mainly in the Allahabad district, it was made optional in the upper primary classes. The Collector of Allahabad, Mr. Fremantle, is much interested in the adaptation of elementary education to the needs and circumstances of a rural population by the starting of experimental plots, gardens, etc., in connection with schools. He points out that, just as the boy is becoming useful in the field, he rises to the whole-time classes with the frequent result that he gives up school altogether. He urges that the remedy is the half-time system, a boy getting through the upper primary classes in three years instead of in two, and the half-time school being made the normal type for the majority of village boys. The popularity of the scheme, save in the Lucknow district, where it certainly seems to have possibilities of success, is as yet doubtful. Most civil and educational officers pronounce it to be unacceptable. Attempts have been made to introduce a half-time system in the *Punjab* but have met with little or no success and have been abandoned in several districts. In the *Central Provinces* the system is of long standing. The boys get through their work in the morning and the sons of village officers, merchants, etc., return again for tuition in extra subjects in the afternoon.

Save in the Central Provinces, the half-time school does not seem to have been a success. It is apt to be regarded, especially by the more substantial folk of the village, as a second rate institution. Possibly its success in the Central Provinces was due to its being made the normal, instead of a peculiar, type for rural tracts, and to its offering a full course to those who required it. The whole problem is fraught with some difficulties and doubt. The child below seven cannot be of much assistance in the fields. His parents will be quite pleased if he is kept quiet at school all day; but it is not good for him to do more than some three hours of study. The older boy can usefully work in the fields and can also usefully spend his day at school. It is a question whether a boy who has spent the morning at school really goes to work for the rest of the day, though this should apparently be possible, or whether, as some aver, he spends his time at play. The United Provinces report suggests a complete enquiry as to particulars of the boy's life—in what operations he helps, to what extent, at what times of year and for how long, and how much the father loses by letting him go to school. The results of such an enquiry might certainly shed some light on an obscure subject.

(b) in factory employ.

290. The problem of children employed in factories is on a comparatively small scale, but the importance, urged in the last review, of putting things on a proper footing while they are still of manageable dimensions, is even greater to-day. The Factory Labour Commission of 1908 considered that factory owners should not be compelled to provide education but that special schools should be established near to factories, financed by the local authorities (the employers probably assisting), where a two-hour course would be repeated twice a-day for the benefit of each shift. This policy has been carried out with varying success.

In *Madras* the most successful school is that of the Buckingham and Carnatic Mills.* In *Bombay* the opening of a certain number of schools was sanctioned, but only a few were successful. The private school at the Morarji Mills, Sholapur, educates 703 factory children and relatives of mill-hands. There are schools, more or less flourishing, at Gadag, Ahmedabad, Virangam and Broach. Bombay city has ten schools with attendance of 465. Their condition appears to be unsatisfactory and in 1916 an arrangement was made with the mill-owners, which however appears not to have been carried out. A scheme was framed for *Calcutta*, involving the erection and maintenance of nine schools at considerable expense to government. It has not yet been entirely carried out. The *maktabs* and ordinary primary schools, aided by the municipality, educate about 1,000 mill-hands. The schools in the *United Provinces* are those attached to Messrs. John & Co's mills at Agra, of which government pays half the up-keep, the government press at Allahabad, supported by government, and Cooper Allen's factory at Cawnpore, which is aided. The total number of children educated is 568. In *Burma* 225 children are said to be employed in factories and none of these receives instruction. In *Bihar and Orissa* some of the mines, the Tata Iron and Steel Company, the Peninsular Tobacco Company at Monghyr and other concerns have schools attached to them. The number of children employed at these places is 9,127, the number of special schools is 47 and that of children under education is 2,839. The most interesting are the schools on

* Bureau of Education, India Pamphlet No. 2. *The Education of factory children in India.*

the colliery estate owned by the East Indian Railway near Giridih, where there is a system of compulsory education for boys between the ages of 5 and 12 years, the most promising pupils being sent on to an upper primary school and eventually to the Beniadih industrial school.* The number of children in these Giridih schools is 2,183. There are five schools in the *Central Provinces*, and, out of 1,597 children employed in factories, 623 are enrolled. In *Assam* there are 14 factories, but the number of children employed is small. Two saw mills and the Assam Oil Company have aided schools.

The essential fact about schools of the kind was stated by the late Mr. Sharp, Director in Bombay, when he said that the active co-operation of the mill-owners is essential to the success of any scheme for promoting education among the children employed in factories and that the opening of special schools in factory centres is of little use unless the mill-owners are prepared to put some pressure on their juvenile employees to induce them to attend the schools.

(c) on tea gardens.

291. The Government of Eastern Bengal and Assam had framed a scheme for schools on tea-gardens. The owners would have their choice between government, aided and unaided institutions. Money was allocated and the gradual establishment of 361 schools was contemplated. The number of children employed in Assam is said to be 305,958. But the correctness of these figures is doubted. The numbers of schools and children in 1916-17 were 149 and 3,127. These figures represent a decrease on those of the previous year. "The result" says the Assam report, "can only be said to be disappointing, nor does the future hold much promise. The two counteracting forces are strong in opposition—the general disinclination of managers and the unwillingness of parents to see the ultimate value of the education provided. Of the two forces the latter is undoubtedly the stronger, for it is inconceivable that any firm demand would not be sure of some degree of response from those in general control." Of the three classes of schools, the unaided is far the most popular in the Assam Valley, the aided slightly the most popular in the Surma Valley. Only thirteen government schools have been opened. The same scheme was introduced in the district of Jalpaiguri (which had formed a part of the province of Eastern Bengal and Assam), initial difficulties were overcome by the assistance of the chairman of the Duar Planters' Association and there are now 67 schools (here also mainly of the third class) with 1,207 pupils. In the Darjeeling district the grant-in-aid system prevails and there are 69 schools, the great majority of which are supervised by the Scottish Mission. There was a decline in pupils during the quinquennium, which is attributed to the withdrawal of pupils by their parents to make them whole-time labourers. The existence of a single school is reported from the Chittagong district.

Night schools.

292. Night schools, which the Bengal Director defines as those held after ordinary school hours to suit the convenience of persons who cannot attend day primary schools, exist in some provinces. Bombay records 111 such institutions with 3,197 pupils, Bengal 886 with 18,563, Bihar and Orissa 259 schools and the district of Yeotmal in Berar 32 schools with 515 pupils. Teachers in day schools ordinarily conduct these schools for an extra allowance. The reports state that they have but little success, unless, writes Mr. Jennings, they are managed by enthusiastic committees or are under the immediate supervision of inspecting officers. The number in Bihar and Orissa marks a large decline.

Continuation schools.

293. In Bengal there are 107 continuation schools (*i.e.*, institutions for pupils who have already left the ordinary schools). with 2,739 pupils. This is a large decline on the numbers recorded in 1912, though the cost, about ₹14,000, is almost the same. Mr. Hornell remarks that they are not very popular.

VIII.—Duration of school life and literacy.

Literacy and education.

294. In the last review it was pointed out that the number of literates in India (as ascertained at the census of 1911) was 59 per mille—namely 106 in the case of men and 10 in that of women; that this is less than it should be in view of the numbers under education; and that a simple calculation seems

* Bureau of Education. Pamphlet No. 2, pp. 18 to 26.

to show that 39 per cent. of the children educated relapse into illiteracy within five years of their leaving school. Burma forms an exception. There the percentage of literacy largely exceeds that of education as shown in the returns, for the reasons that many unrecognised monastic schools supply no statistics and hence the figures of those under education are under-estimated.

The figure of literacy in India is bound to be poor, because only 3·22 per cent. of the population is at school. But it is poorer even than this restricted spread of education would justify, because the time spent at school is in many cases insufficient to make a lasting impression. Of the boys undergoing elementary education in any kind of school 88·9 per cent. are in the lower primary classes; and if both boys and girls are taken, 90 per cent. are in the lower primary and over 45 per cent. in the infant classes.

Duration of school life.

295. It was calculated in the last review that the average length of school life is 3·8 years. A similar calculation made for the period under review shows the figure for pupils in the primary stage again to be 3·8 years. Since the question was broached in the last review it has aroused considerable interest and the method of calculation there adopted has given rise to some controversy. Various mathematicians applied themselves to the problem. One of these arrived at a figure almost identical with that given in the review; another found the period to be much shorter—a result which the impression gained by a long acquaintance with primary schools would probably support. On the one hand, such impressions are often misleading. On the other, the data contained in general table X are insufficient for making the calculation unless certain broad assumptions are adopted. I am indebted to Dr. Walker, F.R.S., C.S.I., for the attention he has bestowed on the subject. While realising the ineradicable difficulties presented by the figures, he calculates from the data that the educational efficiency has improved materially during the period under review; for the average duration of the school life of those who left in the course of the first year of the period was 3·6 years and during the last year 4·2 years.*

The shortness of time passed at school by the average pupil who enters a primary institution undoubtedly accounts for the fact that the figures of literacy are less than what would be justified by the figures of school attendance. But this is not the only reason. Not only is the duration of school life short but it is too often marked by stagnation. The central and most unsatisfactory feature of primary education is the fact that the great majority of the children are in the lower primary classes and nearly half in the most rudimentary stage. The main causes of this condition of things are the paucity of teachers and the poverty of teaching capacity. It has already been shown that changes in curriculum are not likely to effect changes in the length of school attendance. But even were changes in the courses likely to produce such a result, the qualifications of the teaching staff set a limit to what can be attempted. The question of the curriculum itself becomes one of teachers and of methods. Leaving aside detailed criticism of the teaching, says Mr. Richey, there must be something rotten with a system under which in the Punjab the aggregate attendance in the two lowest classes considerably exceeds half the total attendance at institutions of all kinds. In a single-teacher school, with five classes working as they do for five hours a day, the teacher should be able to devote one hour to each class. But the number and variety of subjects taken by the upper primary classes, the greater interest these subjects have for the teachers and the importance attached by inspecting officers to the attainments of senior pupils lead the teacher to devote a large proportion of his time to the higher classes. More than this, were the infant class taken for even an hour a day some progress might result. But the irregularity of making admissions brings it about that the class contains children at very different stages of attainment. This practice and the habits of old-fashioned teachers result in individual teaching or the teaching of very small groups. While the children of the upper classes, who can read and write, are able to study books, do exercises and in some measure educate themselves, those of the infant class are wholly dependent on instruction. They

* See appendix XII.

consequently, says Mr. Richey, spend most of the day reading or re-reading or writing and re-writing (sometimes under the supervision of a 'monitor') the few letters which the headmaster may have pointed out to them at his last visit to the class. Their chief duty, at an age when nature would expect them to be exercising their limbs and their voices, is to sit as still as possible and not to disturb the lessons of the senior classes. Is it a matter for wonder, asks Mr. Richey, that habits of apathy and mental inertia are engendered and that boys whose early education has begun on these lines should show a lack of keenness and originality when they reach the stage when such qualities are expected in their work?

Discussion of the subjects proper for teaching in primary schools remains largely academic while over half of the pupils are studying only the vehicles of knowledge. As the supply of capable teachers increases, the framing of more attractive and perhaps utilitarian courses in the higher classes will become possible. Even now subjects (outside the 3 R's) which are undoubtedly appreciated are land records and tenants' rights and mental arithmetic applied to bazar transactions. In the United Provinces the addition of gardens and demonstration plots to certain schools and the formation of classes in agriculture after the conclusion of the middle course appear to be having some effect. But a more pressing question than that of the course is the provision of enough good teachers to impart it. The manner of instruction is more important even than the subject matter. The problem of primary education is mainly one of staffing. The fact that each teacher has on the average but a small number of pupils does not materially help. For his skill in instruction is often inadequate and the number of classes which he has to handle is excessive.

IX.—Compulsory and free education and problems of the future.

296. In 1911 the late Mr. Gokhale introduced a bill into the Imperial Legislative Council intended to make permissive the introduction of compulsory education in municipal or board areas. The proposal was that, before compulsion could be introduced, a certain percentage of the children of the area must already be at school, the local authority must use its discretion of asking for the application of the provision to the area or any part of it, and the consent of the local Government must be obtained. Wherever the provisions came into force, elementary education would be compulsory for every boy not under six and not over ten years of age. Exemption would be permitted in particular cases and classes. No boy compelled to attend should be required to pay any fee if his parent's income did not exceed ₹10 a month. Wherever compulsion was applied to boys it might also be made applicable to girls. Fines were to be imposed on defaulting parents after complaint made by school attendance committees. Child employment was to be restricted. The local authority in any area to which the Act might have been applied was to provide school accommodation as required by the department and might, for this purpose, with the sanction of the local Government, levy a special rate. But the local Government was also to bear a share of the cost as laid down by the Government of India. *Schemes for compulsion.*

A year later Mr. Gokhale, in moving the reference of the Bill to a select committee, explained that the proportion of children already at school necessary to justify the choice of adoption of the measure should be 33 per cent. of those of a school-going age, that education where compulsory should be wholly free, and that the shares of the expense of the scheme borne by government and local bodies should be two-thirds and one-third. He also made the following suggestion. Reckoning the number of boys who should be at school as ten per cent. of the male population, he found that it would be necessary to provide for $12\frac{1}{2}$ million, of whom four million were already receiving education. The cost of educating the remainder, at ₹5 a head, would be $4\frac{1}{2}$ crores, of which government would have to find three crores and another crore for girls. This reform should be carried out in ten years by the raising of the customs duties from 5 to 7 per cent.

The bill was officially opposed and thrown out, for reasons stated in the last review, by 38 votes to 13. But Sir Harcourt Butler hinted that the intro-

duction of measures of compulsion in local legislatures would be the natural course. This was a few days before the opening of the quinquennium. It cannot be said that the question altogether slumbered for the succeeding five years; for it was several times mooted in the imperial and local Legislative Councils. But it was not till just after the close of the quinquennium that advantage was taken of the suggestion. The Hon'ble Mr. Patel then introduced a bill, the provisions of which in the main resembled those of Mr. Gokhale's, applicable to municipalities in the Bombay Presidency other than Bombay city. This bill was passed into law. Once the lead was taken, others followed; and private bills of a similar nature (but extending also to local board areas) are now pending before the Councils of Bengal and Bihar, and a government bill has been introduced in the Punjab.

Probabilities of success under compulsory and voluntary systems.

297. It remains to be seen whether local bodies, wherever such Acts come into force will avail themselves of the permission to introduce compulsion, raise funds through taxation and provide the facilities required before government sanctions the application of compulsory provisions. Money is the pressing need and without it these measures are bound to remain a dead letter. It is unlikely that the local rates, even if boards elect substantially to enhance their taxation, will suffice unless supplemented by government funds. The Punjab report observes the apathy shown by many municipalities towards elementary education and the Delhi report contains the following passage.

"It is doubtful if there is much widespread feeling in Delhi in favour of compulsory education; the growing interest in education has not permeated to the classes who need the services of their children as wage earners, and these are very numerous. The Municipal Committee would probably normally prefer to spend money on education rather than on sanitation; from many points of view it would be more popular. With the promised growth of independence in local bodies, we shall probably see some attempt made towards compulsory education. It would be too much to say that the step is impossible; it could probably be worked in the same manner as compulsory vaccination at present; but any attempt to make it a reality would incur much hostility among the wage earners. Until the general sense of the community has strengthened, or the pitch of adult wages improved, compulsory education certainly could not be made universal."

As to the chances of mass education on a voluntary basis, various opinions are heard. It is often stated that the people are demanding it. On the other hand there are some significant facts. In the Punjab the number of new schools opened in the quinquennium was six times that of those opened in the preceding period; but the increase of pupils was only double that of the preceding period. In the Central Provinces a certain amount of pressure has to be brought to get children to attend. The desirability has been discussed of investing the village *kotwar*, who is supposed to bring the children to school, with the duties of an attendance officer and attaching fees to the post. At present, "an enrolled scholar is a potential attendant, subject to the fear of the *tahsildar*. Many parents implore the teachers to remove their children's names from the rolls." One of the inspectors in Bihar and Orissa partly attributes a decline in the number of pupils in Sambalpur district to relaxation of the pressure exercised when that district formed a part of the Central Provinces. On the other hand the district councils in Berar have shown themselves willing to impose an enhanced cess for education.

The reasons assigned for failure to send children to school are generally the conservatism of the agriculturists, their disinclination to spare the children from the fields, the inutility of the curriculum, the inefficiency of the schools and the payment of fees. Mr. Richey, who discusses these questions at length, considers that there is no doubt that the first impediment exists, but it is losing its hold and there is a demand for new schools in rural areas. The second objection is, he thinks, much exaggerated, since small children can do no work of value. It is doubtful if any change in the curriculum would have a noticeable effect on school attendance. Indeed, the parent looks mainly for instruction in the 3 R's, and, in the time at disposal, there is but small opportunity to give more. The question of fees is discussed below; but the rate is so low and exemptions so numerous that probably very little effect would be produced by their abolition. Mr. Richey regards conservatism and the inefficiency of schools as the two main retarding causes

298. Demands for compulsion are ordinarily and naturally coupled with demands for free education. The fee paid in primary schools for Indian boys averages 14·7 annas per pupil per annum. In Assam and the North-West Frontier Province primary education is free. In the latter province this change was introduced at the beginning of the quinquennium and extends to pupils in the primary stages of secondary schools and to all publicly managed institutions; private institutions retain the right of charging fees but have generally decided to abolish them. In Assam the concession was extended during the period to vernacular middle classes. The Bombay report says that primary education is practically free in the case of girls and the most backward classes. Mr. Mayhew considers that, in the Central Provinces, under the present fee system, nothing is to be gained by free education and that only one such demand has emanated from a local body. "The obvious reply to it is that our rules make it impossible for any one to be deprived of primary education on grounds of poverty. Those who can pay but have no use for education will not be converted by the remission of 12 annas a year." *Free Education.*

299. The Government of India had, in their resolution of 1913, proposed the doubling of the present number of boys at school on a voluntary basis. The out-break of war prevented the provision of the necessary funds and only a portion of the programme was executed. Then came the question of political reform, with its many problems. Pending their solution, no indication could be given of the policy of the Government in the matter of primary education. *Government of India's proposals for expansion.*

300. Two lines of progress are thus indicated. On the one hand, bills are being introduced permitting the adoption of compulsion. On the other hand, the Government of India and local Governments have combined to allocate such funds as it is possible to find during a time of financial strain for purposes of education—largely of elementary education. While this money may be used for the furthering of schemes of compulsion, it is probable that, until the popularity and success of such schemes are assured, the progress made will largely be on a voluntary basis. Future policy will depend on the willingness of local bodies and the people generally to accept compulsion and on the financial and administrative re-adjustments which take place. The immediate prospects of voluntary expansion on existing lines are reasonably good. The old prejudice against education which existed in considerable areas has largely broken down. The application of funds and the opening of new schools have been accompanied by a steady increase of pupils, though not to the same extent in different provinces. The instances of indifference or opposition mentioned above come from parts of the country where education has always shown less tendency to advance than elsewhere. *The future.* (*a*) *Expansion.*

301. But it is impossible to rest content with an expansion of mass education on present lines, or with a system under which a large proportion of the pupils are infants stagnating in a crêche, the remainder glean only an acquaintance with the 3 R's and only a small residue continue to the stages where some of the fruits of this initial labour can be reaped. Given sufficient funds and sufficient schools, education could probably be made universal on a compulsory or on a voluntary basis within a comparatively short time. But it would be an education which in many cases ended almost with the cradle and left thirty-nine per cent. of its recipients totally illiterate a few years after its cessation. This is the real crux of the problem. At the moment that a boy reaches a stage of reasonable intelligence he also becomes a useful economic asset and, even if he has not at once to begin labour in the field or the factory, the utility of further study ceases to be apparent. To overcome this attitude we must look partly to better teaching, possibly to the addition of vocational classes, but mainly to the economic changes which are slowly permeating the country—agricultural progress, co-operative movements and the growth of industries. Measures of compulsion may pave the way by rendering familiar the application of the principle to infants. The rub will come if it is applied to boys whose withdrawal from the labour market will cause economic dislocation before the changes specified above have so operated as to produce altered conditions. It is on economic progress that the future rests. We cannot expect to see in India a literate and intelligent proletariat until that (*b*) *Prolongation of school life.*

progress has permitted the provision of the necessary funds for more schools and more efficient schools and brought about the necessary change in the attitude of the people.

Meantime, the basis of elementary education can be extended and endeavour made, by more useful curricula, by the appointment of better teachers, by a quickening of the pace in the lower classes, by half-time systems and by agricultural and industrial schools to carry on instruction beyond the insufficient stage at which it now ceases.

CHAPTER X.

ORIENTAL STUDIES.

I.—General.

Organisation and management.

302. Instruction in the oriental classics is given partly in the general course of school and college education, partly in special institutions. The numbers of those studying in the former are to be found in general table III under the column which shows students learning a classical language. The special institutions are the oriental colleges, some of the schools classed as 'other schools' and a number of private institutions. These last contain the great majority of learners of the classics.

Much of the instruction is given in privately managed or private institutions. Government however maintains some important institutions, gives aid of various kinds and, either directly or through the agency of Boards or associations, assists in holding examinations.

The languages ordinarily taught in India are Sanskrit, Arabic, Persian, Pali, Hebrew, Armenian and Avesta-Pahlavi. This chapter deals only with oriental classics. But it may be mentioned that Latin and Greek are taught in European schools and offered as classical languages by the universities. French is also studied—mainly by girls in European institutions, though it is not uncommonly taken up by Indians in some parts of the Bombay presidency where it is found useful for commercial purposes.

II.—Figures of pupils and expenditure.

Institutions and pupils.

303. There are 24,806 students in arts colleges learning classical language against 19,251 five years ago.

The number of oriental colleges has fallen from 17 with 1,452 students to 9 with 698 students. This decline is largely the result of re-classification, places which were formerly classed as colleges being now returned as schools. The number of private institutions where advanced instruction is given has risen from 2,634 with 55,250 pupils to 3,009 with 60,618 pupils. But this increase is fictitious, being confined to Burma, where a large number of Pali schools have now been returned. The Sanskrit and Arabic schools in India as a whole have declined in number.

Expenditure.

304. The expenditure on oriental colleges is returned as ₹99,146 against ₹72,374 in 1911-12. The amount contributed by provincial revenues is no less than ₹70,420. It is natural that fees should play a small part; but more might have been anticipated from endowments and subscriptions. Doubtless however there are many institutions where returns are faulty or even non-existent or where the teacher offers his services for unrecorded gifts and seeks nothing beyond the means of livelihood which will enable him to pass on the sacred torch.

III.—Instruction in schools and colleges.

Method and result of teaching.

305. Classical languages are not ordinarily taught in primary schools (see paragraph 280). The study of such a language is begun during the secondary stage and is compulsory for all university matriculations save those of Madras and Allahabad. Above this stage it is an alternative subject.

The *pandits* and *maulvis* employed in the secondary schools are not generally trained and their methods are frequently stereotyped. But graduate teachers are also employed. The Bombay report says of the school teaching that, " after the necessary foundation of grammar has been laid, the amount of time spent on the study of grammatical formalities and irregularities is cut down; the time so saved is to be utilised in reading extracts from the literature of the language and in practising translation from unseen passages. Translation into dead languages is not insisted on to the same extent. Free use of the vernacular is also allowed in teaching." The Sanskrit course for the Calcutta matriculation comprises some 92 small pages of prose and poetry. The standard required in the higher stages was indicated in the last review.*

The conference of orientalists which met in 1911 (see paragraph 313) considered that the Indian universities had not done much to extend the field of classical knowledge. Though the college professors are frequently men of considerable erudition, the student, save when he reaches the M. A. course, imbibes his knowledge of the language and its literature along with that of other subjects hardly or not at all correlated with either. The production of deep scholarship is rare.

IV.—Instruction in special institutions.

306. The classification of special institutions on a logical basis is difficult. The following classification is offered. *Classes of special institutions.*

(*i*) The first class consists of those institutions which are connected with a university, though they do not teach the usual university courses leading up to an arts degree. The only university which maintains an oriental college is that of the Punjab. This college is of long standing but has never proved very attractive. It instructs the students of the Government Arts College in the oriental classics, prepares its own students for the oriental titles of *Shastri* and *Maulvi Fazil* conferred by the university and also teaches the courses leading up to the Bachelor and Master of Oriental Learning (B. O. L. and M. O. L.), which involve the attainment of European learning through the medium of the vernaculars. A certain amount of reciprocity is now allowed between the arts and the oriental courses. An arts student may be admitted to the title examination; a M.A. in Sanskrit, who obtains a title, *ipso facto* receives also the degree of M. O. L.; a student who has earned the highest oriental title may take the matriculation and other arts examinations in English only and thus becomes a B. A.; if he then takes the M. A. in a classical language, he also becomes *ipso facto* a M. O. L. Thus, by two slightly different processes, a student may become the happy possessor of two degrees and a title—M. A., M. O. L. and *Shastri* or *Maulvi Fazil.*

The Sanskrit college at Calcutta cannot be classed under this category; for, though in its capacity of an affiliated college it prepares students for the ordinary arts degree, the course on its purely oriental side leads up to the examinations of the Board of Sanskrit Studies in Bengal.

Some of the universities maintain chairs of oriental studies or kindred subjects. These are mainly for the benefit of advanced students. The University of Calcutta has a Carmichael chair of ancient Indian history and culture and a chair of comparative philology. The University of Allahabad has a chair of post-Vedic studies.

The University of Madras has instituted title examinations, the first of which was held in 1915. It has recognised seven Sanskrit colleges as capable of preparing for these.

(*ii*) There are other colleges and important seats of learning. They fall generally into two classes.

Some are assisted, or even maintained, by government, and present pupils at organised examinations. Such are the Sanskrit College at Calcutta, which, besides offering regular university arts courses, prepares pupils for title examinations, the ancient colleges at Nawadwip and Bhatpara, the Hemanta Kumari Devi College at Rampur-Boalia, the Sanskrit college at Benares, etc.

*Sixth Quinquennial Review, page 203.

Among Arabic institutions may be mentioned the larger *madrassas*—the Calcutta Madrassa, founded by Warren Hastings, those at Hooghly, Dacca and Chittagong and the famous Sind Madrassa at Karachi. These *madrassas* generally have secular as well as oriental sides, the former department taking the shape of a high school in which Arabic and Persian are taught as second languages. Finally there are the larger *hpongyi kyaungs* in Burma, some of which receive rice from government (money they could not properly receive). Among new government institutions are the Sanskrit College (developed out of an older institution) at Muzaffarpur in Bihar and Orissa and the Sylhet Madrassa in Assam.

Second, there are those which receive no aid and do not present their pupils at public examinations. Among these are some of the ancient seats of Arabic learning in the United Provinces and certain of the *kyaungs* in Burma.

(*iii*) The next class comprises the number of smaller institutions which, though they teach much the same subjects as those of the previous class and often present candidates at the same examinations, do not enjoy their reputation and collect only a few pupils. Such are the *tols* in Bengal, Bihar and Orissa, the United Provinces and Assam, where a hereditary *pandit* collects round him about a dozen Brahman pupils; and some of the smaller monastic institutions of Burma.

(*iv*) The great mass of *maktabs* and Koran schools are for the most part less places of oriental learning than schools for Muhammadan children where the necessary *suras* of the Koran are learnt by heart and without understanding. Occasionally a little secular learning is added; and places of this kind are capable of being converted into primary schools while still retaining the distinctive names of *maktab* or *mulla* school and their religious character.

(*v*) In addition to places of instruction there are a few institutions of research which serve also to train research workers. A worthy building, standing in a quiet walled garden at Benares and fitly termed 'Saraswati Bhawan,' enshrines a library of manuscripts where the veteran orientalist Dr. Venis works with a few devoted students who have come from different parts of India.* A Sanskrit Research Institute has been inaugurated at Poona to perpetuate the work of the great scholar Sir Ramakrishna G. Bhandarkar, who has bequeathed his library to the institution. Private generosity in Bombay has also provided funds for a Cama Oriental Institute, in memory of a scholar, the late Mr. K. R. Cama. Government has promised to assist.

(*vi*) Finally there are oriental schools of medicine, such as the Tibbia College at Delhi, where the Yunani and Ayurvedic systems are taught.

V.—Encouragement of oriental studies.

Examinations, aid and scholarships.

307. Those of the foregoing institutions which are recognised present pupils at organised examinations. Such are title examinations conducted by the Madras and Punjab Universities. Other organisations are the following.

The *Madras* system was modified in 1915. A number of Sanskrit schools are recognised and aided and government awards scholarships tenable at the Sanskrit colleges. It is under contemplation to create a board for the holding of an examination which should conclude the school course and admit to these colleges, as well as for the award of the scholarships. Personal allowances are given in *Bombay* to *shastris* and *maulvis* of the traditional type. The Board of Sanskrit Examinations in *Bengal*, aided by government, recognises a large number of *tols* and conducts title examinations, while the Central Board of Examiners, Bengal Madrassas, performs similar functions in the case of *Madrassas*. The Sanskrit College at *Benares* holds examinations both for its own students and for those of affiliated *pathshalas*. Examinations in *Bihar* and *Orissa* were under the control of the Board of Sanskrit Examinations in Calcutta. In 1914, a committee was appointed to discuss Sanskrit education. As a result, a Sanskrit Association was formed with the Maharaja Bahadur Sir Rameshwar Singh of Darbhanga, G.C.I.E., as president, to conduct the title examinations, distribute stipends and rewards and advise government as to grants for recognised *tols*. The Government of *Burma* continues the old *Patamabyan* examination in Pali and distributes rice to deserving monasteries. In *Assam* the administration holds examinations of *tols* and

* This was written before Dr. Venis' death in April 1918.

madrassas on the result of which stipends are granted to the teachers and scholarships to the pupils. The Calcutta Sanskrit Board also has two centres of examination in Assam.

Besides the scholarships given under these systems, there are many others for the encouragement of students, some given by government, others the result of private endowments, such as the Springer research scholarship in Bombay and the Sadho Lal scholarship in the United Provinces.

Government confers the titles of Mahamahopadhyaya ('most mighty teacher') and Shams-ul-ulama ('sun among the learned') upon distinguished scholars of the old school of learning together with a small annual allowance.

Special inspection.

308. A special inspecting staff is sometimes maintained for the encouragement of oriental institutions. In Madras there is a superintendent of Sanskrit schools in the provincial service. The United Provinces has a superintendent of Sanskrit studies, an inspector of *pathshālas* and an inspector of Arabic *madrassas*. The Government of Bihar and Orissa propose the appointment of a superintendent of Sanskrit studies in the provincial service. He will probably have to be trained in Europe and will eventually have two assistant superintendents, one of whom has already been appointed. The inspectors of Muhammadan schools in Bombay and Bengal are concerned with the general educational problems of that community rather than with classical instruction.

Collection of manuscripts.

309. In 1868 the Government of India sanctioned an annual allotment of ₹24,000 for the purchase and preservation of manuscripts. This sum was divided among the provinces.

In connection with the Oriental Manuscripts Library in Madras, a search party has been organised, which has considerably increased the number of manuscripts and has also been engaged in cataloguing the Tanjore Palace Library. The Deccan College Library at Poona, containing nearly 20,000 manuscripts, is said to be the largest existing collection of such manuscripts of which a printed record exists. The cataloguing has given great difficulty and has finally been abandoned in favour of a system of indexing. Bengal possesses valuable libraries—a collection of some 10,000 manuscripts catalogued by Mahamahopadhyaya Hara Prasad Shastri, those of the Asiatic Society of Bengal, and of the Sanskrit, Serampore and Bishop's Colleges. The oriental section of the Punjab University library received a valuable addition in the Azad collection presented by Agha Muhammad Ibrahim. The United Provinces and Burma have fine collections of Sanskrit and Pali manuscripts—the former at the Sanskrit College, Benares. Four volumes of the catalogue of the famous Oriental Public Library at Bankipore have been published. Government pays for the services of the cataloguers and the printing. There are many other collections in private possession.

Associations and journals.

310. Among the more important associations which assist in research are the Bombay branch of the Royal Asiatic Society (with an auxiliary at Madras), the Asiatic Society of Bengal, which receives liberal grants from government, the Indian Research Society in Calcutta, the Punjab Historical and the Burma Research Societies. A Research Society has recently been started in Bihar and Orissa.

These associations publish journals, and the Asiatic Society of Bengal publishes also the *Bibliotheca Indica*. The *Epigraphia Indica*, the *Epigraphia Indo-Moslemica* and the report of the Archæological Survey are published by government. There are also the *Indian Antiquary* and *Indian Thought*, published respectively in London and at Allahabad. The *Bombay Sanskrit Series* is intended to encourage original work on critical lines; its cost is borne by government.

VI.—The problem of classical study in India.

Popular feeling about the classics.

311. In the last review it was stated that a sense of the non-utilitarian nature of oriental studies was rising in some quarters in India. This feeling has during the quinquennium further manifested itself in the partial secularisation of the *madrassa* courses in Bengal (see paragraph 498). On the other hand it was noted that it was coming to be regarded as a reproach that India

had lagged behind western countries in the field of oriental research. The works of the classical authors are regarded on the whole with pride and a knowledge of them with respect.

Old and new methods of study.

312. Two very different methods of study are found in India. The one is that pursued by the college student who takes up a classical language as part of his course because it is an obvious subject to offer or because some acquaintance with a classic is respectable. The knowledge which he gains is not deep and he seldom pursues his studies further. On the other hand there are the indigenous systems. In the Sanskrit *tols* the *pandit* gathers round him a few students and instructs them in one or other of the usual subjects, grammar, poetry, philosophy, astrology or medicine, and through the very methods which have been in vogue for centuries. Similarly the *madrassas* provide instruction in literature, Muhammadan law, logic, rhetoric, philosophy, geometry, the sayings of the Prophet and commentaries on the Koran. In the *hpongyi-kyaungs* the student in Pali may be seen lying on the floor committing the classics to memory. The problem is to combine the critical methods, which university instruction carried to its farthest limits is capable of instilling, with the deep but uncritical and narrow knowledge acquired by the student taught upon indigenous lines.

The conference of 1911 and its results.

313. At the conference of orientalists held at Simla in 1911 it was urged that the indigenous *pandit* is an essential factor in oriental research and that he should be made as efficient as possible along present lines; but that when a *pandit* has fully acquired the traditional learning and shown exceptional ability his outlook might profitably be broadened by wider knowledge and a study of modern languages and critical research. Among the various recommendations of this conference, the most important was the establishment of an oriental research institute, which would provide a meeting place for European and Indian scholars and offer an environment to those who had been trained in the traditional schools.

Difficulties have arisen regarding the founding of this institute but in the meantime the creation of a few chairs of higher studies at universities and of the Bhandarkar Research Institute at Poona shows that what government has hitherto been unable to accomplish is likely in some measure to be attempted by other agencies. Useful work is going on in various places, Indian scholars are trained and manuscripts are collected. Further impetus and organisation, however, are still required in order that the obscure wells of knowledge which exist in the country may be more fully tapped and full use made of manuscript collections and of the lore possessed by the *pandit* and the *maulvi*.

CHAPTER XI.

PROFESSIONAL EDUCATION.

I.—Limited scope of chapter.

Scope.

314. This chapter deals with education in law, medicine, agriculture, forestry, veterinary science and commerce. It ought also to include education in the profession of engineering. As however the demarcation is slight between institutions which teach engineering and those which give industrial training, it is more convenient to treat of engineering in the next chapter. Preparation for the profession of teaching, too, is reserved for a special chapter.

II.—Law.

Qualifications required for the legal profession.

315. The various grades of the legal profession in India were described in the last review. The qualifications required are a call to the bar of England or Ireland or enrolment as an advocate of the principal courts of Scotland, the law degree of an Indian University, and the passing of an examination held by the Court for pleaders, *mukhtars*, etc. These qualifications, in varying degrees and combinations, admit to certain privileges under the High, Chief and Subordinate Courts. Barristers generally have the advantage over men trained in India for purposes of enrolment as advocates and for practice upon the original side of the High and Chief Courts. Indian law degrees can be obtained only after graduation in arts or science and by success in a series of law examinations. The resultant anomaly of 'England-returned' barristers of no particular ability ranking above purely Indian products of repute and experience was remarked in the last review and the measures were described whereby the High Court of Calcutta and, in a less degree, that of Bombay have attempted to remedy it.

Institutions, students and cost.

316. The institutions which prepare candidates for Indian qualifications ordinarily form part of the general educational system of the country and are often attached to Arts colleges. Our concern here is primarily with the university courses and secondarily with the pleadership classes.

The number of colleges and classes was 35 in 1902, 33 in 1907, 25 in 1912 and is now 23—twenty-one of these being called colleges, and the institution at Rangoon and the pleadership class at Gauhati being called schools. Government manages 10* of these, three are managed by universities, one by the Midnapur municipality and nine are unaided institutions under private management. Some of these are large—the Calcutta University college has over 2,000 students; some contain a bare half dozen or less.

The number of students has risen from 3,046 to 5,479. It is suggested that a cause contributing to this increase is the unwillingness of parents to send their sons to England during the war. The total cost is ₹4,29,200 against ₹2,64,494 in 1912. Government contributes ₹32,781 of which ₹30,000 go to the Calcutta University Law College.

The diminution in the number of institutions is indicative of the concentration of law teaching which has marked some provinces from the commencement. All provinces have one institution apiece, save Bengal which has nine, the United Provinces which has four, Bihar and Orissa which has three and Assam which has two.

Characteristics and changes in provinces.

317. The characteristics of the institutions and the principal changes during the quinquennium are as follows.

The *Madras* college staff has been greatly improved and now consists of a principal (whole-time, save that he is allowed chamber and consulting practice) and eight professors who are allowed to practise. The *Bombay* law school (classed as a college) more

* The returns show 13 managed by government; but this number includes the Calcutta University Law College, the University School of Law, Allahabad, and the Punjab University Law College.

than pays its way on fees. A committee in 1915 discussed its future and recommended the appointment of two whole-time professors and the provision of a hostel. The institution has no building of its own; the classes meet in the Elphinstone College. The University Law College, *Calcutta*, has 56 teachers, 2,161 students and a grant of ₹30,000 from the imperial allotment. The Dacca, Ripon and six other colleges have classes. The University School of Law at *Allahabad* has been provided with a fine building and a hostel. The *Punjab* University Law College has been provided with increased staff and branch hostels. The law classes at *Rangoon* are attached to the government arts college. Most of the degree-students are non-Burmans. At *Patna* the government college has a staff consisting of a whole-time principal, six part-time lecturers and a teacher for the attached pleadership classes. The class in the *Central Provinces* is attached to the Morris College. A college was opened during the quinquennium at Gauhati in *Assam* and is called the Earle Law College. It has a full-time principal and three part-time lecturers. The *Benares* University scheme includes instruction in law. The other classes are generally very small.

Courses and degrees.

318. The law course commences after the ordinary degree has been taken and generally lasts for two years. The Calcutta University course is of three years or two and a half for those placed in the first division at the preliminary examination. The course at Madras, prolonged for a short time to three years, has again been reduced to two. The courses are half time, that is to say, the students attend classes in the morning or the evening. The part-time lecturers are engaged in the courts during the day and in some provinces (Madras in particular being an exception) many of the students are reading for the M. A., teaching in schools or following some other profession. The Benares University regulations forbid the reading of the mastership along with the law course. The graduation course ordinarily includes jurisprudence, Roman, Hindu and Muhammadan law, the law relating to person and property, contracts and torts, evidence and civil procedure, crimes and criminal procedure. The examinations are compartmental, occurring at intervals during the course. In 1917, out of 2,729 candidates, 1,712 graduated in law. A further examination (for which study at a college is not required) is held two years later for the M. L. or LL. M. degree; in the Punjab this is called the honours LL. B.; at Calcutta the minimum of two years' interval is not required. The degree of LL. D. is given in all universities save Bombay.

The pleadership classes are generally held along with those for the university courses. The course and the examination are controlled by the Courts.

General features of the quinquennium.

319. The general tendency during the quinquennium has been towards further concentration, the strengthening of the staffs, especially by the appointment of a few whole-time professors, the erection of separate buildings and the provision of hostels.

III.—Medicine.

General progress.

320. There is an insistent demand in some parts of India for the outturn of a large number of medical practitioners. The number of colleges has, in response, increased from four to eight and their students from 1,396 to 2,511. The number of schools has grown from 24 to 29, but the increase of pupils, though large in Madras, has been from 3,860 only to 3,983. Expenditure on colleges has risen from ₹6,60,460 to ₹9,52,881 and that on schools from ₹4,70,944 to ₹6,19,173. There has also been a movement towards opening wider the door of professional recognition. Admission to the preliminary scientific examination of the University of Bombay is no longer limited to students of the Grant Medical College. A privately managed college has received affiliation from the University of Calcutta. New qualifying agencies, other than the universities, have sprung into being in the shape of a College of Physicians and Surgeons in Bombay and a State Medical Faculty in Calcutta, while elsewhere there are State Boards of medical examiners. Finally, a large college of Yunani and Ayurvedic medicine has established itself at Delhi.

On the other hand, the growth of institutions intended to meet the demand for medical diplomas has required some protective measures. Medical Registration Acts have been passed in all provinces and it is hoped

ultimately to have a Consolidation Act. The Indian Medical Degrees Act of 1916 regulates the grant of titles implying qualifications in western medical science and the assumption and use of such titles by unqualified persons. The only bodies now permitted to confer diplomas which qualify their holders to practise western medical science are the established universities, the Colleges of Physicians and Surgeons, the State Medical Faculty and the State Boards just mentioned.

Another feature of the period has been the increase of facilities for medical research.

Medical colleges.

321. The colleges actually in existence at the close of the last quinquennium were those of Madras, Bengal and Lahore and the Grant Medical College at Bombay. All these are government institutions. Just after the end of the period, King George's Medical College at Lucknow, also maintained by government, was opened. An important move was the establishment of the Lady Hardinge Medical College for Women at Delhi, subsidised by government and managed by a governing body (see paragraph 421). A privately managed college was established at Belgachia in Calcutta, and was affiliated up to the first M. B. Examination. The eighth college is the Tibbia College at Delhi, which teaches the Yunani and Ayurvedic systems. The question of converting the Agra Medical School into a college has been deferred till the conclusion of the war.

The following are the principal changes which have taken place in previously existing institutions. The appointment of a whole-time Dean for the administration of the Grant Medical College, *Bombay*, has been sanctioned. Arrangements have been made for the improvement of medical education in *Madras* and for the reorganisation of the teaching staff at the Madras Medical College. The university now provides for half-yearly examinations. The title of its degree has been altered from 'Bachelor of Medicine and Master of Surgery' to 'Bachelor of Medicine and Surgery.' Two new degrees of Master of Surgery and Doctor of Medicine have been introduced. The L. M. S. degree is still retained. The new college building at *Lahore* was completed and opened in November 1915, under the designation of the King Edward Medical College. The new college provides all requirements for the present and for many years to come and compares favourably with similar institutions in other parts of India.

Training of military Assistant Surgeons.

322. The scheme for improving the training of military assistant surgeons by instituting a five years' course of study has received the approval of the Secretary of State. It is the intention to train such students for the Membership qualifications of the College of Physicians and Surgeons, Bombay, and the State Medical Faculty, Calcutta, which examinations, it is hoped, will ultimately be recognised by the General Medical Council of Great Britain and Ireland. The scheme, however, is held in abeyance during the war and, pending the introduction of a system of nomination and the recognition of the examination, Military Assistant Surgeons are recruited and trained as formerly.

Research in tropical medicine.

323. A School of Tropical Medicine has been built in Calcutta. This institution is designed to afford post-graduate training in tropical medicine on lines somewhat similar to those of the schools of tropical medicine in England. Of still greater importance, however, are the facilities that it will offer for research work, in which material Calcutta is singularly rich. The tea, jute and mining associations are endowing scholarships for the special investigation of diseases prevalent among the labour employed by them. The school will hold an examination and grant a diploma at the end of a six months' course of study. The sanction of the Secretary of State has been accorded to the appointment of the professorial and other staff required for the school, which, however, will not be opened till officers are available to fill the professorial appointments and till the financial position permits.

In Bombay considerable sums have been expended upon the Bacteriological Laboratory at Parel to enable it to function also as a post-graduate school of tropical medicine and hygiene.

At the X-Ray Institute, Dehra Dun, and the Central Research Institute, Kasauli, the ordinary classes of instruction have had to be discontinued during the war; although at the former institution some special short classes have been held to train officers to meet the urgent requirements of the military authorities.

IV.—Agriculture.

Objects of agricultural education.

324. The subject of agricultural education in India has engaged the attention of the Government of India in one form or another ever since it has had an agricultural policy. Side by side with the organisation and expansion of agricultural departments, colleges have been opened and syllabuses of instruction framed; but the results have hitherto been disappointing.

The main objects underlying any policy of agricultural education in India are the improvement of the agricultural methods of the country and the attainment of material advancement both in agricultural practices and in economic conditions. To effect this improvement it is necessary to start educational endeavour on the following lines:—

(1) Education of the landed classes and sons of cultivators.

(2) Education of a class which will provide the agents for the diffusion of improved practice.

(3) Education of a class to work out methods of improved practice.

The education of the two latter classes is provided in the agricultural colleges described in paragraph 328, that of the first class in paragraph 329.

Discussions on organisation and courses.

(a) The Board of Agriculture, 1913.

325. The standard curriculum for the agricultural colleges prescribed by the Board of Agriculture of 1906 and amended in 1908 proved a failure. It consisted mainly of a number of independent courses which had no reference either to general education or to their suitability to the practical agriculturist and the result was that it failed to attract suitable students. The subject was therefore again discussed at the Board of Agriculture of 1913 and the present quinquennium is important in the history of agricultural education in that the policy laid down previously has been entirely changed. The Board emphatically condemned the uniformity in syllabus imposed on provincial agricultural colleges and passed resolutions to the effect that the various provinces should be free to work out the system best suited to their local conditions and that it was advisable to have both practical and advanced courses. The Board expressed its approval of the scheme by which a course of four years was divided into two courses of two years—the first two years qualifying candidates for subordinate posts in the agricultural department while the second two years' course was of a more scientific character leading up to the full diploma or B. Sc. degree. The practical course was intended for those who either want to return to their land or to secure posts as agricultural assistants. Thus the Board advocated a policy of giving much latitude to provinces in the framing of their programme of agricultural teaching and in adapting the teaching more fully to the general standard of education and to the stage of knowledge reached through agricultural research and experiments. In short they aimed at achieving the main objective of improving the agricultural methods then in vogue in the country—by not only providing a higher scientific training which would ultimately fit Indians to help in agricultural investigations, but also by giving such practical education as would enable the majority of them to apply, on the land, the lessons of improved agriculture.

(b) Pusa conference, 1916.

326. The general question of agricultural education was further discussed at a conference of agriculturists and educationists at Pusa in February, 1916. The conference while emphasising the principle that agricultural colleges should aim at giving a liberal education which would be as complete as possible was forced to the conclusion that this was not in all cases practicable, as the educational qualifications of the students attending the existing colleges were not sufficiently high to justify the general raising of the standard at all colleges. But the conference considered it desirable that there should be at least one college in Upper India at which education should not be restricted to the training of men for departmental requirements. For

western and southern India the existing colleges at Poona and Coimbatore might work up to this standard and it was suggested that they should be affiliated to universities and should provide the highest courses possible in general agriculture and scientific training. In other provinces where a college exists which does not come under this scheme, these institutions should continue to train the subordinate staff of the agricultural departments and provide such instruction for actual cultivators as is desirable and suitable to local conditions. The Pusa conference also thought it advisable that students who were taking a four years' course leading to a degree should qualify by an intermediate examination for employment on probation in the lower ranks of the agricultural department, confirmation to depend on the passing of a test in practical farm work on the conclusion of the probationary period.

With regard to vernacular short courses the Pusa conference held that it should not be made a department of the college work, but that there was no objection to the giving of courses of instruction in practical agriculture on the college farm or on other farms of the department without relation to the work of the college. In respect of rural education it advised that attempts to teach agriculture in primary schools should be abandoned. The conference suggested that more might be done to arrange school vacations and hours of study with reference to the agricultural calendar. The question of the establishment of vernacular agricultural schools was also discussed. It was thought that owing to the difficulties of obtaining suitable teachers it might be difficult to start vernacular schools in all provinces. The proceedings of the conference were referred to local Governments for opinion.

(c) Simla conference, 1917.

327. Since the close of the quinquennium, a further conference to discuss future developments of agricultural education in the light of the opinions expressed by local Governments on the proceedings of the Pusa conference of 1916 was convened in Simla in June 1917. The main conclusions arrived at were:—(i) that the foundation of agricultural middle schools and the training of teachers for such schools are essential steps towards the more general diffusion of agricultural knowledge amongst the agricultural classes, which should have the effect not only of raising the standard of agriculture and therefore the standard of living throughout the country but also of widening the range from which material for higher agricultural training can be selected. (ii) That primary education in rural areas should be adapted more closely to rural needs. (iii) That each of the principal provinces of India should have its own agricultural college as soon as the agricultural development of the province justifies that step. (iv) That the question of the affiliation of agricultural colleges to universities should be left to the decision of local Governments in accordance with local conditions. These views, and the desirability of formulating a definite policy which will pave the way for more rapid progress as soon as financial circumstances permit, have been urged on local Governments. The subject was further discussed at the Board of Agriculture in India in December 1917, which supported the conclusions outlined above and framed a model syllabus for agricultural middle schools.

Education of experimenters and instructors in agricultural colleges.

328. The colleges and the changes which have taken place in them are described below.

The curriculum and staff of the *Pusa Agricultural Research Institute and College* remained unchanged during the quinquennium. In view however of the recommendations of the Royal Commission on the Public Services in India for providing facilities for higher agricultural education in India, the revision of its syllabus is under contemplation. Thirty post-graduate students attended the Institute during the period under report. A number of officers and assistants of other departments, such as the Forest and Education, and the Indian Tea Association did research work in the laboratories of the Institute. The short courses of instruction in cattle breeding, poultry management and fruit culture have been abandoned; those on lac, silk production and apiculture are maintained. Thirty-eight students attended these courses during the period under review.

To give effect to the recommendations of the Board of Agriculture of 1913, a two years' preliminary course to be followed by a more advanced course of 18 months has been introduced in the *Coimbatore Agricultural College*. The first of these courses is to be devoted to agricultural live-stock, dairying and horticulture, practical and theoretical, with particular stress on the agricultural aspect in every case. The course is complete in itself. It is mainly designed for those who intend to become practical

farmers. The further course has been devoted to more detailed work on the sciences underlying agriculture. Only a portion of those who pass through the first course and are capable of following the advanced course are admitted to it and on successfully completing the full course they are awarded the diploma of L. Ag. Forty-two students joined the college in 1913, 43 in 1914, 42 in 1915 and 77 in 1916.

The *Poona Agricultural College* is affiliated to the Bombay University and prepares students through a three years' course (subsequent to the previous) for the degree of B. Ag. The curriculum of this college was thoroughly overhauled on the recommendations of the committee appointed by the Bombay University Syndicate in 1915. The revised course came into operation in 1916. It has been considerably altered. The second year's examination has been abolished; a certain amount of specialisation by students who wish to obtain the agricultural degree is required and the course is made to fit in more closely with the actual needs of students. Since 1916, the Bombay University has created a new degree of Master in Agriculture to be given definitely for research in matters connected with agriculture. The number of students attending the college courses was 112 in 1916-17. A small number of students take the regular course though not admissible to the degree. These are mainly students from Sind who have passed only the matriculation.

The *Sabour Agricultural College* which serves the needs of Bengal, Assam and Bihar and Orissa has not so far attracted many students. One of the reasons for this is that the three years' course is more scientific than practical and, the quality of students being generally low, is above their capacity; as a result the number of students began to decline. In order to remedy this defect and to make the college more attractive a change in the curriculum was made which came into operation in 1915. A two years' course is now in force. Its main feature is that it attempts to give practical training in agriculture with science teaching of a much more elementary type than was given in the original diploma course. It is expected that the two years' practical course will appeal far more strongly to the real cultivators than the three years' course with its more advanced scientific subjects. The old three years' course will come to an end in March 1918. It is at present running alongside the new two years' course. There is no advanced course in this college and it might more appropriately be called an agricultural school. The total number of students on the roll at the beginning of the session of 1917-18 was 35.

During the period under review the *Kanungo* class was removed from the *Cawnpore Agricultural College*. Two courses have been arranged, one of which is of two and the other of four years' duration. In the two years' course the instruction is given in Hindustani and is of a practical character. It consists mainly in the teaching of agriculture in its different branches besides dairying, care of cattle, veterinary practice, agricultural entomology and agricultural engineering. This course is intended for sons of cultivators or landlords or for those who wish to enter the lower subordinate service of the agricultural department. The L. Ag. or 4 years' course is taught in English and consists of instruction, practical and scientific, in agriculture and its allied subjects as well as in rural economy and the technique of co-operation. Both the courses are popular. The total number of students on the 31st August 1916 was 113, of whom 54 were in the collegiate or four years' course and 59 in the two-year or vernacular course.

In the *Lyallpur Agricultural College* the old three years' course was brought to an end in April 1915 and a new syllabus was introduced. The number of students seeking admission began to decline soon after the opening of the college and in 1913 a crisis was reached when no new class could be formed. As a result of this failure and in pursuance of the policy advocated in 1913, a modified course extending over a period of four years and divided into two parts of two years each was started. This came into force in 1914 and met with some success. The first part consists of simple practical instruction in agriculture and elementary courses in scientific subjects while the second part gives a systematic course in science applied to agriculture. At the end of the first two years' course a leaving certificate is given to successful students which qualifies them for admission into the subordinate rank of the agricultural department. The second course leads to the Diploma of L. Ag. This course has on experience been found radically unsound. Students after going through the practical course have been found unable to assimilate higher scientific training. They lack exactitude and facility in expression. In accord with the opinion of educational experts in the province, it has therefore been decided to affiliate the college with the Punjab University and to institute a degree of B.Sc. (Agri.), and an intermediate examination at the end of the first two years. The two years' college leaving certificate course will remain for the present. In the meantime, the revised course has become popular; 38 students—the full number admissible—joined the college in July 1916.

In the light of the recommendations of 1913 a change in the curriculum of the *Nagpur Agricultural College* was effected from 1st July 1915. It is now on the lines of the Coimbatore College. Under the new course practical and theoretical agriculture, including as much allied science as is necessary, is taught during the first two

years. This course in fact is a preliminary to a higher course of from 1½ to 2 years leading up to the degree of L. Ag. Those students who pass successfully through the two years' course are selected for the degree course. The passed students are recruited for the upper and lower subordinate services of the local department of agriculture. There is not as yet much demand for the services of these college trained men from zamindars and landlords. The entry of new students in 1913 was numerically disappointing. In 1914, under the old system, 30 students were admitted in the first year. In 1915, 41 students joined the college and in 1916 the number of students was 36.

329. The education of the first class mentioned in paragraph 324, the sons of landed proprietors and cultivators, is provided in other ways and has received considerable attention during the quinquennium. *Education of proprietors and cultivators.*

The method generally adopted for the education of the illiterate cultivating classes is the demonstration of improved methods and this is done by departments of agriculture either on the cultivator's field or on government farms. In some provinces regular classes in particular subjects are held on the farms while in others parties of cultivators are invited to the farms and shown the improved methods. For the sons of small landowners short practical courses are given in some colleges and in some provinces vernacular schools have been established.

In *Bombay*, as the greater part of the buildings of the agricultural college at Poona is in charge of the military authorities for use as a war hospital, it has been necessary to abandon temporarily the annual practical course. In 1914-15, 27 students attended the short course but since then the course has been suspended. It is however in the establishment of the vernacular agricultural schools that a marked development has taken place. Four such schools are at present successfully running, two of which are government while the other two have been started with private funds. The Model Government school at Loni aims at attracting boys of from 13 to 18 years of age, who have passed the fourth vernacular standard and at continuing their general education for two years, adding to it instruction in agriculture. The curriculum involves at least half the working time being spent in the field, whether in farm work, or in gardening, dairying, etc. The school has been successfully filled—20 students being taken on an average. The annual cost of each pupil is said to be about ₹180 (half for maintenance and half for education) and has been defrayed from funds provided by government as well as from subsidies received from private persons. Eighty-one boys had passed through the school by the end of October 1916, most of whom are said to be farming on their own land. Other schools are working more or less on similar lines.

In *Bengal*, the progress of nature study in primary schools and of agricultural classes in secondary schools is not what it should be. The results have been disappointing and the unsatisfactory progress is attributed to the want of a properly trained staff. The class for training overseers and sub-overseers and other subordinates of district boards and road committees in arboriculture was continued during the period under review at the Royal Botanic Garden at Sibpur. The results are reported to have been successful.

In the *United Provinces* the two years' vernacular course given at the Cawnpore agricultural college is of the nature of technical training and has proved successful. The majority of the students after finishing their education return to their homes to manage their own property, while some get employment as managers of some of the larger estates in their province. Sixty-seven boys have been admitted from the institution of the course up to 1916. A course in mechanical engineering is also given.

As stated in the last review the lower agricultural education in the *Punjab* is confined to the vernacular class at the Lyallpur Agricultural College where 50 to 55 students are taken annually for this course. So far the class has maintained its popularity. The highest number admitted into the college for this course was 62 in 1917. Besides this, attempts are being made to impart agricultural education in the existing schools of the education department. Nature study is a compulsory subject in primary and normal schools and so is agriculture in the junior vernacular teachers' examination. In the vernacular middle and entrance (science faculty) examinations agriculture is an optional subject. There are however various defects in the present system, the chief being the incapacity of the teachers, and the absence of suitable material to teach nature study and agriculture. The number of pupils taking agriculture in vernacular middle schools has fallen off from one out of every three in 1913 to one out of every eleven in 1917. On the other hand the number of candidates taking agriculture in high schools has risen from 27 in 1913 to 471 in 1917.

In *Burma* the work of the department in connection with agricultural education is confined mainly to the practical training of the subordinate staff of the department. This is done at the agricultural experimental stations.

In *Bihar and Orissa*, there are two short courses given at the Sabour college farm. Training of sons of cultivators at experimental stations is continued. Four scholar-

ships of ₹20 each were awarded to natives of the province in 1916 and 1917 and nine scholarships of ₹20 a month each were sanctioned in 1917 for the training of boys at the agricultural farms at Sabour, Bankipur, Cuttack and Ranchi.

In the *Central Provinces*, the question of imparting agricultural knowledge and of education generally among the cultivating classes has been kept well to the fore. Short courses of practical instruction are given at the Powerkhera, Hoshangabad and Raipur farms. So far, these schools have been well attended and if they prove successful the local Government contemplate the establishment of boarding schools for the sons of landowners. These will be situated on government farms and only sons of landowners will be admitted. The curriculum will be a modification of that of the middle schools so as to make it more useful as a training for boys who will return to the land. The object in short is to give boys a bent towards farming.

In *Assam*, the work in regard to nature study and agricultural education has proceeded on the same lines as during the past quinquennium. The department trained a number of apprentices on government farms with a view to employing them as demonstrators. The course is of two years and is intended to be thoroughly practical.

Libraries.

330. The third edition of the Pusa Library catalogue was published during the period under review. Over 2,300 volumes have been added during the quinquennium. The Research Institute library contains 12,300 volumes on agriculture and allied sciences. The provincial college libraries have also expanded. The Poona Agricultural College has an annual grant of ₹2,500 for purchase of books. There were 8,390 volumes in this library at the end of 1915-16. The Lyallpur Agricultural College library was organised during the period under review according to the system introduced in the Punjab University library The Cawnpore College library maintains its reputation as one of the best of its kind in India.

Publications.

331. The following text-books have been published during the quinquennium :—

1. Some Southern Indian insects by T. B. Fletcher, R.N., F.E.S., F.Z.S., Imperial Entomologist.
2. Tube Wells, boring, sinking and working by T. A. Miller-Brownlie, Agricultural Engineer, Punjab.
3. Crop Pest Handbook for Bihar and Orissa (issued by the department of agriculture, Bihar and Orissa).
4. A Handbook of Agricultural Leaflets (in Hindi), by G. Evans, M.A., Deputy Director of Agriculture, Central Provinces.
5. A Manual of Elementary Botany, for India, by Rai Bahadur K. Ranga Achari, M.A., Lecturing Botanist, Agricultural College, Coimbatore.
6. Some Diseases of Cattle in India. A Handbook for stock-owners by Major G. K. Walker, C.I.E., Superintendent, Civil Veterinary Department, Bombay.

In addition, many bulletins of an educational nature have been issued by various departments of agriculture.

V.—Forestry.

Importance of forestry.

332. Education in forestry is of great importance by reason of the vast tracts of forest under the management of government. It was narrated in the last review how the training of lower subordinates in the forest service was relegated to provincial institutions and the central institution at Dehra Dun was raised to the status of a college with the addition of a research institute.

The Forest Research Institute and College.

333. The Forest Research Institute and College at Dehra Dun now provides for research and the training of the provincial forest service and rangers for northern India. A two-years' course for the provincial service and for candidates accepted from Native States has been introduced during the quinquennium at the college. An admission examination has been established. In the course itself, physiography, mineralogy and soils have been excluded from the subject of physical science and partially included in the sylviculture course, the teaching of forest accounts and procedure has been abolished and a searching practical examination has been instituted. A

manual of surveying has been published for the use of the students and revised manuals of forest botany and forest engineering are under preparation. A hospital has been provided, and quarters and a club house for the provincial service students. There is now residential accommodation for 40 of these and 80 of the rangers' class. The annual expenditure on the research institute and college has risen from ₹2,62,626 to ₹3,01,949. The staff consists of the president, the forest botanist, the forest economist and his assistant, the sylviculturist, the forest zoologist, the chemical adviser, four imperial service instructors and four provincial service instructors. The post of forest chemist has not yet been filled.

Training of rangers, guards, etc.

334. Rangers are also trained for Madras at the Forest College at Coimbatore and for Burma at the Forest School at Tharrawaddy. A further important measure of decentralisation is contemplated. It is proposed to make over the Forest College at Dehra Dun to the Government of the United Provinces for the training of rangers in that province, the Punjab, Bengal and Assam, to utilise the Coimbatore College for the training of rangers in Madras, Bihar and Orissa and the Central Provinces and to establish a new college at Dharwar for rangers in Bombay. Final orders have not been passed and it is not expected that the scheme will come into effect till 1920.

The training of deputy rangers, forest guards and other subordinates is already decentralised and is provided in the various provinces. The class in Assam has been temporarily closed till suitable candidates can be obtained and the financial position of the department in that province has improved.

VI.—Veterinary Science.

Scope of the department's work.

335. The demand for veterinary education in India is still practically confined to candidates for the public service either in British India or in Native States; but there are now clear indications of the growing popularity of the protective and curative measures adopted by government to combat animal diseases. The work of the department has consequently expanded rapidly, though the increase in staff has not kept pace with it. The number of officials recruited in this country, namely, Deputy Superintendents and corresponding officers attached to the college staffs, inspectors and veterinary assistants rose from 911 in 1911-12 to 1,210 in 1916-17; but the latter figure is still appreciably below the sanctioned strength, which is 1,647 officers. In fact, the development of the department has now reached a stage at which the demand for indigenous recruitment of qualified veterinary officers has outstripped the supply.

Colleges and schools.

336. Education is provided in the four veterinary colleges at Lahore, Parel (Bombay), Belgachia (Calcutta), Vepery (Madras) and at the Burma Veterinary School at Insein and a small branch school at Taunggyi in the Southern Shan States. Some increase in the teaching staff was sanctioned to meet the growing demand for recruits, including two imperial posts which, however, could not be filled owing to the war.

The numbers in the four colleges have risen from 488 to 545. The expenditure has also increased and now stands at ₹3,92,096. The number of those who successfully graduated in the course fell from 661 in the previous quinquennium to 541 in the quinquennium under review. The reasons for this are the difficulty of obtaining a sufficient number of recruits with the necessary educational equipment, the raising of the standard of examination at the Punjab and Madras colleges and the shortage in the teaching staff on account of the deputation of officers to military duty. Most of the instruction at the Punjab college as well as at the Insein school is in the vernacular. In the other institutions it is in English. The institutions are controlled by the local Governments and staffed by officers of the Civil Veterinary Department assisted by trained Indians. Each college possesses a laboratory used both for demonstration and also for diagnosis and research. The new buildings of the Punjab college were completed and opened by Lord Hardinge in December, 1915. The course at this college is now of 4 years, save for military students and students from other provinces who undergo a three years' course. At the other colleges the course is of three years. A post-graduate course of

one year's instruction in English for Deputy Superintendents was inaugurated at the Bombay, Punjab and Bengal colleges but temporarily dropped owing to the war.

The Insein school has also a three years' course and a post-graduate class has been introduced for promotion to inspector. The equipment and buildings have been improved. At the Taunggyi school the instruction is of an elementary nature extending over a year and a half.

VII.—Commerce.

General.

337. No single branch of education has made such remarkable strides as that of commerce. Ten years ago there were twelve commercial schools with 584 pupils, costing ₹25,343 a year. Five years ago the corresponding figures were 28 schools, 1,543 pupils and ₹82,278. There are now 70 institutions, three of which are classed as colleges, with 3,727 students, involving an annual expenditure of ₹2,31,006 of which government provides ₹77,494.

Colleges and college courses.

338. Nor has the advance been merely numerical. The principal development was the foundation in 1913 of the Sydenham College of Commerce and Economics at Bombay. Its primary aim is "to furnish young men embarking on a business career with a university education of such a kind as will assist them, by deepening and widening their understanding of industrial and commercial organisation, to rise to the more important and responsible positions in their respective vocations, and, from the larger public and cultural point of view, to promote the study of social conditions in general, by means of specialised courses in the various branches of economic science and by original research." It teaches the degree course instituted by the University of Bombay and has evening classes for those in employ upon banking law and elementary statistical methods and data. The method of teaching is by lectures, small discussion classes, seminars, etc. The college is at present inadequately housed. The fund which was publicly raised in connection with it is utilised in subsidising a hostel for its students. The college costs ₹69,772 a year, of which ₹34,015 is provided by Government and the rest found from fees. There are 241 students. Nearly all successful students are reported to obtain suitable employment. An advisory board, composed mainly of business men, gives valuable assistance.

The Bachelor of Commerce (B. Com.) course instituted by the University of Bombay commences after the previous stage and lasts for three years. At the conclusion of the first year the intermediate is taken, comprising English, general elements of economics, geography and elements of accounting. The course for the further two years is in commercial correspondence, administration, mercantile and industrial law, special branches of economics, economic history and one out of a list of special subjects, such as accounting and auditing, etc. The principal is laying before the university certain proposals, such as a comprehensive course on business methods, the inclusion of the economics of cotton industry among the optionals and the establishment of a further M. Com. degree.

The University of Allahabad, too, has instituted a commercial certificate course which lasts for two years subsequent to matriculation. It is a heavy course and the university has consented to modify it. The principal of St. John's College, Agra, speaks of it as follows.

> "It will be noticed that the course covers a wide range of useful subjects and should furnish students with such a knowledge of commercial subjects in general as to enable them to rise to important and responsible positions in the commercial world, such as accountants, managers, and secretaries of companies, and heads of departments in large establishments and the commercial instructors of the near future will no doubt be drawn from those who hold the Commercial Examination Certificate. Those who have passed this examination possess a very fair knowledge of commercial subjects in general and there is little doubt that their services will prove valuable in all kinds of business houses and Government offices. When it has become more generally known that there are now in India young men who possess such qualifications, after their capacities have been put to a wider test, we venture to prophesy not only that the demand for them will increase, but that useful and lucrative careers will be open to them."

This college (St. John's, Agra) and also the Christian College, Lucknow, are affiliated in the university course.

339. In addition to these colleges, there are various schools, which are of the nature of business schools, ordinarily confining themselves to short-hand, type-writing and book-keeping. They are often run as private speculations. *Schools.*

The numerous schools of *Madras* are of this type and the Director considers them the less necessary since commercial subjects were included in the secondary school leaving certificate scheme. There is a successful school of commerce at Calicut, which has trained a number of teachers for teaching commercial subjects in high schools. *Bombay* has not merely its college, but also a number of schools, which increased during the period from 7 to 39 and their pupils from 321 to 1,880. They are mainly of the unaided type. *Bengal*, in addition to eight aided and seven unaided schools, possesses a Government Commercial Institute, with 276 students, costing ₹20,584 a year, of which ₹16,388 comes from provincial revenues. In addition to a regular course, this institution offers evening classes in mercantile law, banking and currency, insurance and annuities and similar subjects. It is partially controlled and its examinations are conducted by the Government Commercial Institute Board. The two colleges which have university classes in the *United Provinces* maintain also commercial institutes with their own courses and examinations. The Meerut College too had commercial classes (now closed). In the *Punjab* the Government Commercial School at Amritsar has not been altogether successful, and is now attached to the local high school. *Rangoon* has four recognised schools. In *Bihar and Orissa* the number of schools has risen from two to five. Commercial classes are attached to the government high school at *Delhi*.

Apart from the university courses established at Bombay and Allahabad, the following are the examinations ordinarily taken in these schools– the Government Technical examinations in Madras, the Government Commercial Institute Board's examinations in Bengal, the London Chamber of Commerce examinations in Bombay, and the Commercial examinations of the Midland Counties Union of Educational Institutions, Birmingham, at Rangoon. The inclusion of a clerico-commercial course in the United Provinces school leaving examination is found useful for providing pupils with a career.

340. Among subsidiary causes which have led to this remarkable expansion of commercial education is the greater demand for skilled clerical labour and for trained auditors and accountants. Government offices and business firms require stenographers, etc., and the wages of such men are rising with the demand. This serves as an encouragement to the lower kind of business school. The passing of the Indian Companies Act, the Provident Insurance Societies Act and the Indian Life Assurance Companies Act has opened up a wider career for men trained in auditing and accountancy. It has been suggested that the Sydenham College might be utilised as a central examining body for the organisation and conduct of examinations for accountants and for the award of a diploma which might be made the basis for the issue of auditors' certificates. An Accountancy Diploma Board has accordingly been established in Bombay. It is proposed to give matriculates or holders of equivalent certificates five years' theoretical and practical training in accounts including three years of service under a practising accountant. This would lead to a diploma indicating qualifications as high as those prescribed for chartered and incorporated accountants. Evening classes, with this end in view, were opened in 1916. It is also proposed to grant the diploma to bachelors of commerce who have studied advanced auditing and accounting as a special subject, the period of service with an accountant being in their case reduced to two. *Reasons for expansion.*

But the main cause of development is probably a growing desire (manifested chiefly in Bombay) to prepare for active commercial enterprises rather than trust to the lottery of a literary education, government employ and the learned professions. With the growing complications of trade, expert knowledge is becoming indispensable. It is a good sign that this is recognised and that promising students are beginning to see the value of practical training. The old tradition, however, is hard to break, and Mr. G. K. Sen, principal of the Government Commercial Institute in Calcutta, complains that about a third of the students leave before their time, to enter private schools, government service or arts colleges, since the matrimonial value of a matriculate entering government service is more than that of one entering an

institution like the Commercial Institute, "and the matrimonial value of a matriculate continuing his studies in a college is more than that of either the above." Of the remainder who stay on, less than half sit for the final examination.

CHAPTER XII.

TECHNICAL AND INDUSTRIAL EDUCATION.

I.—General.

Organisation.

341. Engineering schools and colleges and the various kinds of technical schools are treated together, partly because of the innate connection of the subjects and partly because one and the same institution frequently affords instruction in both these branches. Instruction in engineering in its different grades is imparted in colleges and schools. Owing to the paucity of facilities in India, industrial education of the higher type is largely given in foreign countries and scholarships are awarded to Indian students to enable them to proceed thither. But there are also schools for mechanical engineering, for weaving, mining, carpentry and leather work. The schools of art too are described in this chapter, as they are mainly industrial institutions.

Schemes and Committees.

342. Features of the quinquennium have been the further elaboration of the schemes worked out at the commencement of the present century, the consideration of the reports of the Atkinson-Dawson Committee in India and of the Morison Committee in England (see paragraphs 355 and 357), the creation of the Indian Industrial Commission and the deliberations of the Public Works Department Reorganisation Committee. Provincial committees have been numerous and the Bengal District Administration Committee made certain recommendations regarding industrial instruction.

Management of institutions.

343. All the colleges of engineering, many of the technical schools and all the more important art schools are maintained by government. There are also however many aided technical schools, including one of the most important, namely the Victoria Jubilee Technical Institute in Bombay.

Control and inspection.

344. The arrangements for the supervision of technical and industrial schools vary considerably in the provinces. The main questions at issue are, first, whether their inspection should be retained by the departments of public instruction or vested in the departments of industries; second, what kind of an inspecting agency should be created; and third, whether a transfer of industrial schools to a department of industries should be accompanied by that of technical schools also. The tendency is to place industrial schools under a director of industries independent of the control of the director of public instruction but working in consultation with him and to leave technical schools to the department of public instruction. It is true that in some provinces it has not been found possible to carry out such a scheme. But this is due partly to lack of funds, partly to the difficulty of obtaining the services of suitable persons as directors of industries.

345. Local governments are also beginning to depend more and more upon advisory committees, on which expert opinion is included, both in the management of larger institutions and in the general conduct of policy.

In *Madras* the Industrial Conference of 1908 had recommended that the control of industrial and technical education should rest with the department of industries and that there should be a whole-time inspector of industrial schools. The local Government accepted this report in respect of industrial education but decided that technical education should remain under the department of public instruction. As a result, the control of 35 industrial schools was transferred to the department of industries but on its abolition re-transferred to that of public instruction. Finally, however, the department of industries was reconstituted in 1914 and the superintendent of industrial education was placed under it together with the industrial experts. The present position is as follows. The School of Arts, the Reformatory School and purely commercial schools are under the control of the director of public instruction. As regards other schools the general principle is that those in which the training is predominantly intellectual or commercial are controlled by the director of public instruction, while these in which the

training is predominantly manual or industrial are controlled by the Department of Industries. In *Bombay* a committee made various proposals regarding the organisation of technical schools in 1912. One of these was that the Victoria Jubilee Technical Institute should be constituted the central institution for the presidency, the courses of others being so arranged as to admit of their students naturally proceeding to the central school. This recommendation was accepted. It was also proposed for the control of the smaller technical schools either that an expert inspector should be appointed in subordination to the director of public instruction or that a special body of direction should be established. Government accepted the second alternative. The resultant Committee of Direction for Technical Education consists of the director of public instruction, the chairman and two other members of the board and the principals of the Victoria Jubilee Technical Institute and of the Engineering College, Poona. This committee has assumed the control of all technical schools save the manual training classes, girls' schools and the David Sassoon Reformatory School. A proposal was also accepted to create two inspectorships. But the war has prevented its realisation. Technical schools in *Bengal* are inspected by a superintendent of industries who is on the staff of the department of public instruction. But as the result of the various proposals which are described later in this chapter the appointment of a director of industries, who would work under the commercial department of government, has been recommended. The post has not yet been sanctioned. The intention is that the incumbent should concern himself with industrial schools, technical schools being left to the department of public instruction. The office of Director of Industrial Enquiries and Inspector of Industrial Schools was created in the *United Provinces* in 1910. On his resignation a Director of Industries was appointed with a large Board of Industries intended to co-ordinate industrial work and education. He is charged with the inspection and (under government) the direction of industrial education. The Thomason College and the Cawnpore Technological Institute are however independent of him, though he has power to visit them and make enquiries. In the *Punjab* there is no special agency for the inspection of industrial schools, the smaller of which are supervised by the inspector of manual training. Hence the schools remain under the general control of the department of public instruction, though a standing committee was appointed in 1915 for the formulation of proposals regarding technological institutions generally. In the *Central Provinces* industrial (as apart from technical) schools are now mainly controlled by the Director of Industries. In the *other provinces* the supervision of technical and industrial schools remains with the department of public instruction, save that the three government weaving schools in *Bihar and Orissa* were recently placed under the care of the Registrar of Co-operative Societies.

II.—Figures of institutions, pupils and expenditure.

346. The number of the institutions dealt with in this chapter (*i.e.*, engineering colleges and schools, technical and industrial schools and schools of art) is 283, with 16,594 pupils, and the corresponding figures in 1911-12 were 268 and 15,779. The expenditure on them has risen from ₹23,73,506 to ₹28,81,067. The portion of this debitable to provincial revenues has risen from ₹14,14,634 to ₹17,89,921. *Institutions, pupils and expenditure.*

III.—Engineering Education.

347. The recognised grades in engineering education are those which prepare engineers, upper subordinates and subordinates in the service of government or of local bodies. The engineer courses are varied to suit the needs of civil and of mechanical engineers. They are framed and the examinations conducted by universities, save in the case of the Thomason Civil Engineering College at Roorkee. In the lower grades the control of courses and examinations is exercised by the local Governments in their appropriate departments, save in the Punjab. *Organisation.*

348. Education is imparted in 23 institutions, containing 2,193 pupils and costing ₹11,29,425. These institutions comprise four colleges and nineteen schools, in which are included survey schools. The engineer departments exist only in the colleges, which however provide for instruction in the lower grades as well. *Institutions.*

349. The four colleges contain 1,319 students and cost ₹8,26,731 a year. They are staffed by members of the educational services and to a lesser extent by members of the public works department. All of these colleges save that at Roorkee are affiliated to the university within whose territorial limits they are situated. All are government institutions. *Colleges and the instruction of Engineers.*

The Engineering College at *Madras* admits candidates who have passed the intermediate to a four years' theoretical course in civil or in mechanical engineering. Arrange-

ments have recently been made for the teaching of higher electrical engineering. Admission to the degree of Bachelor of Engineering is conditional upon a candidate spending at least one further year in practical work, so that the full course is actually five years. The college also contains upper and lower subordinate classes. The scheme for the transfer of this college to Guindy has not yet been completed.

The Engineering College at *Poona* admits candidates who have attained to the previous stage. The course is of three years each of which is closed by an examination, the bifurcation to civil or mechanical engineering commencing after the first year of study. The university has recently prescribed a fourth year of study, to be devoted to practical work. But this course will not come into force until government is in a position to provide the additional staff required. The upper subordinate class goes through the same course as the engineer class. But when the engineer class is extended to four years a practical course of three years will earn a diploma. The buildings of the college have been improved at considerable expense. An advisory committee has been formed. A probationer's class had been opened for those who cannot be accommodated in the regular college classes and whose admission has consequently been postponed for a year. The lower courses have been overhauled and made more practical.

The Civil Engineering College at Sibpur, near *Calcutta*, admits students who have passed the intermediate to an engineer course of four years with bifurcation after the examination which closes the first two years into civil, mechanical and electrical and mining engineering. As a matter of fact the engineer course is purely civil, the other courses having hitherto remained a dead letter in the engineer department. The organisation of the course is similar to that at Madras in this respect also that a fifth year of practical training at the works is required for the earning of the college diploma, although in this case the university confers the degree of Bachelor of Engineering as the result of the four years of theoretical education. The lower or apprentice classes exist in this college under the name of overseer and sub-overseer classes. Other kinds of instruction are also given at the college. The tinctorial chemistry department was closed in 1916 with the exception of the artisan classes in dyeing, which have now been removed to the Weaving Institute at Serampore. The various proposals regarding the removal of this college to Ranchi and other matters are noticed in paragraph 372.

The Thomason Civil Engineering College at Roorkee in the *United Provinces* is not affiliated to any university, but confers its own diplomas in the engineer department as well as in the lower departments. Admission to the engineer course is by an entrance examination, candidates at which must possess a degree or a school leaving certificate indicating that the candidate has passed in one or more of certain subjects such as physics, chemistry, etc. The course extends over three years. Mechanical engineering is taught. There is a department of technology, the various branches of which are however being gradually transferred to other places.

The characteristics of the engineer course may thus be summarised. Some previous study in an arts college is required everywhere save at Roorkee. The examination system is ordinarily compartmental, tests being held at the end of every year or every other year. Where there is a choice between civil and mechanical engineering the bifurcation takes place after one or two years of study in a common course, which largely consists of mathematics, science, elementary mechanics, drawing, etc. Finally the necessity of practical work in shops is coming to be recognised, but, in university courses, is fully recognised only at Madras.

Local Governments ordinarily guarantee a certain number of appointments in the public works department to successful candidates in the civil engineer courses.

Instruction in architecture.

350. There is an architectural section of the school of art in Bombay. It has been greatly developed during the quinquennium. A member of the staff of the Architectural Association's School was appointed. The courses and examinations were improved. Closer touch was established with the consulting architects to government and with architects in private practice, with the result that posts were found for all who completed the course and the demand has out-run the supply. The principal of the school of art considers that a firm foundation has been laid for a school of Indian architecture, based on tradition, sound design and draftsmanship applied to modern requirements.

Instruction of subordinates.

351. The upper and lower subordinate courses are ordinarily open to boys who have passed the matriculation or some equivalent examination and last for two, three or more years. Thus, in Bengal, the sub-overseer course is of two years. A candidate may then proceed to a further two years' study and obtain the overseer certificate. A fifth year of practical training will secure him the certificate of a sub-engineer or an upper subordinate. The overseer examina-

tion in Bengal can be taken in mechanical as well as civil engineering. A three year mechanical and electrical course has also been instituted which does not demand the passing of the sub-overseer examination, and a course of similar length has been framed, but not introduced, for civil engineering.

Save in the Punjab, where the university conducts an engineering certificate examination for matriculates who have subsequently undergone technical instruction, the tests concluding these courses are held by the departments concerned, the staff of the colleges or special boards. Among these latter is the Joint Technical Examination Board for Bengal and Bihar and Orissa. It consists of the Chief Engineer, the principal of the Sibpur College, the headmasters of the Dacca and Bihar schools (mentioned in the next paragraph), the superintendent of industries, and two superintending engineers.

Schools for the instruction of subordinates.

352. Courses for subordinates, as well as others of a similar standard, are taught both at the colleges and at schools. These latter number 19 with 874 pupils and cost ₹3,02,694. Nine of them are managed by government, the remainder by private bodies. Some of the so-called technical schools also instruct pupils in the sub-overseer course.

Among the more important schools are the *Dacca* and *Bihar* schools of engineering, which teach up to the overseer examination. At Dacca both the mechanical and civil courses were taught; but the former have now been concentrated at Sibpur. A scheme has been framed for the improvement and enlargement of the Bihar school, in which the training of railway apprentices is to be included. Minor portions of this scheme have already been introduced. The Government of the *Punjab* maintains a school at Rasul, whose students readily find employment in the public works department, etc. The only engineering school in *Burma* is the government school at Insein, the previous history of which had been considerably chequered. It has now improved, the numbers have more than doubled and the proportion of Burman pupils has increased. It comprises civil and mechanical engineering classes, a training class for technical instructors, a class for telegraphists and a small art department. During the quinquennium a government school was opened at *Nagpur*, with a civil engineer class for overseers and sub-overseers, a mechanical engineer class which prepares for the second class boiler certificate examination and an automobile class. More than half the students' time is devoted to practical work; and the civil engineer students also spend six months under training with the public works department. Other institutions, such as the Technical School at *Lucknow*, will be mentioned in the section dealing with industrial education.

Among the smaller so-called technical schools, those in *Bengal*, the popularity of which was noticed in the last review, have suffered some eclipse. The quinquennium has seen a great falling off in the demand for admission to their sub-overseer classes. Two of the district boards have withdrawn their subsidies as being contrary to law and several of the schools have closed their sub-overseer classes and become purely industrial. Six of these classes however still survive affiliated to the joint examination board.

The Public Works Department Reorganisation Committee.

353. During the concluding months of the quinquennium a committee was considering the reorganisation of the public works department. Though its report appeared after the close of the period, some of its recommendations regarding the education of civil engineers should be mentioned. Among these are the retention of the four colleges and their continuance under the control of the local Governments, as against their concentration or their subjection to an imperial advisory board. The committee put forward as a general suggestion the abolition of upper subordinates, who, in their opinion, form an undesirable compromise between the engineer officer and the subordinate proper. Hence only two grades of instruction would be left, and, when the demand for engineers justified the step, the subordinate grade might be removed from the colleges to separate schools—a scheme which would meet the difficulty experienced in training officers and subordinates together. While the majority of the committee favour a low age limit and the school leaving stage for admission to engineer courses, they are assured that the matriculation standard is so low, especially in some provinces, that the imparting of the necessary amount of general knowledge would throw too great a strain on the staff and that the knowledge of English at that stage is inadequate for any but the most elementary technical instruction. Hence they would adopt the intermediate with certain subjects, or such European school standards as may be considered equivalent, as the qualification for engineer courses and the matriculation or school leaving certificate for subordinates' courses. At the same time, the maximum age limit should be lowered in both cases. The committee consider the theoretical instruction given at the government colleges sufficiently high—

in the case of subordinates perhaps even higher than is necessary. But they found opinion almost unanimous that students lack practical ability. They accordingly recommend insistence on practical training—for engineers a five years' course, three of which would be spent at college and two on works, the practical part being regarded as an integral portion of the course and no degree or diploma being awarded till it is satisfactorily performed; and for subordinates a four years' course, of which three years should be spent in college and one on works. So important do they regard this reform that, should the universities refuse to recognise the practical training as a necessary qualification for the degree (as it is already recognised by the University of Madras), engineering colleges should in their opinion sever their connection with those bodies. The affiliation of Roorkee to a university is not recommended. They are opposed to specialisation during the three years' college course, but consider that a college might usefully specialise in sanitary engineering, irrigation, etc., as post-graduate courses for students who have completed their general training; and they recommend the development of the architecture department in the Bombay school of art into a regular school leading up to a degree in architecture. The committee found the four government colleges well equipped (indeed unnecessarily so) and satisfactorily staffed.

IV.—Industrial education.

Industrial research.

354. In connection with industrial training, mention must first be made of the Indian Institute of Science at Bangalore. The aim of Sir J. Tata, its founder, was research pure and simple, not necessarily research as applied to industry. But such research has naturally found an important place in the development of the institution and departments of general chemistry, applied chemistry, organic chemistry and electro-technics have been opened. Among the pieces of research work which have been started may be mentioned the investigations into the manufacture of sandal-wood oil. The institution takes in students and has at present 36.

Grades of industrial training.

355. Institutions for industrial training may be classified as (*i*) technological institutions intended to instruct in the principles of science as applied to industrial arts and to produce masters and managers of industries and scientific advisers; (*ii*) technical or intermediate schools for the training of foremen and others who require some knowledge of scientific principles and machinery; (*iii*) trade or craft schools intended to train artisans to follow their calling with dexterity and intelligence.

Lieutenant-Colonel Atkinson and Mr. Dawson, who made an enquiry at the end of the preceding quinquennium as to the means for bringing technical institutions into closer touch and more practical relations with employers of labour, came to the conclusion that there was practically no opening for high grade mechanical or electrical engineers whose education is mostly of a theoretical character. But there is a large opening for the employ of those who after training in a properly equipped institute gain their practical experience by a rigid system of apprenticeship. They made similar proposals regarding the training of pupils for textile industries, etc.

(*i*) *Higher technological training.*

356. The scope for the higher type of industrial training is no doubt limited. It is sometimes made a complaint that government does not afford sufficient facilities for instruction in this grade. There are however considerable difficulties in the way. There is not the same number of industrial centres nor the same variety of industries offering fields for training as are to be found in other countries. Some aversion is shown to apprenticeship and the pupil who has made a theoretical study of the subject is apt to think that he is at once fit to conduct complicated business. Capital is shy and students even when possessed of good theoretical attainments in their subjects sometimes find difficulty in obtaining remunerative employment, still more in raising funds for the initiation of enterprises.

(*a*) *by means of State technological scholarships.*

357. In view of the first of these difficulties state technical scholarships tenable abroad were instituted in 1904 with the object of qualifying the holders to assist in promoting the improvement of existing native industries and the development of new industries, especially those which are or may be organised on a considerable scale and those in which Indian capital is or may be embarked.

Agriculture, law, medicine, forestry and veterinary science are excluded from the scheme. Engineering has now been included. But it is recognised that practical training in engineering is difficult to arrange in England. The value of each scholarship is £150 a year in addition to travelling expenses and education fee. A scholarship is tenable for two years. But this period may be extended. Ordinarily one scholarship is awarded to each province annually but more may be given subject to a total annual limit of 10. The favourite subjects are textiles, mining and mining engineering, mechanical and electrical engineering, leather, metallurgy, etc.

Up to date, 113 scholars have been sent to the United Kingdom. Of these, 36 have not yet completed their time abroad. Five are employed in private industrial firms abroad, and four in state employ outside India—mainly in connection with the war. The scholarships of two were cancelled; one resigned his scholarship; two refused to return to India. Two are undergoing further education. Three are dead, all of whom had been employed—two in India and one by the Bristol Corporation. The whereabouts of two is unknown. Of the remaining 56, 31 are in private employ in India; 18 in the employ of government or Native States, one is translating scientific works into Hindi, one joined the bar, one is a sub-deputy Collector and four are unemployed—one of whom is said to have refused a post of ₹300 a month. The private employment obtained in India is almost always industrial, and usually under a firm, though a few ex-scholars have started their own businesses. The State posts always have some bearing on industries and are connected with geological surveys, forestry or educational institutions. A feeling had long been prevalent that full value was not being obtained from the scholarships and as a result the Secretary of State appointed a small committee known as the Morison Committee. This committee was by no means pessimistic regarding the past results or the future utility of the system. But it made certain recommendations. As regards selection, the scholars, if not hereditarily connected with an industry, should possess a degree with science; they should have had practical experience of the industry in India; the principle should occasionally be adopted of choosing a man rather than an industry for encouragement; and business men and directors of industry should be freely consulted. As to training, practical experience in a business firm should be regarded as an integral part of it and the duration of the scholarship extended (to an extreme limit of five years) in order to allow for time so spent. As to the means of providing this training, the committee found a certain number of firms which, on patriotic motives, were willing to afford it; they considered that further enquiry would furnish a sufficiently extensive list; and they suggested that, if the appeal to patriotism were unsuccessful, influence might be exercised through the Stores Department of the India Office. Some recommendations were also made regarding the procedure followed in sending scholars to England, the amount of allowances and certain changes in the rules. Among these last, the most important had reference to the desirability of making clear the duties of the scholar towards the employer with whom he is apprenticed. " When a firm has undertaken to receive a technical scholar in its works, it is of paramount importance that it should have full control over him; it must be in a position to direct the young man to do what work it thinks best and to exact absolute obedience in all orders and unfailing punctuality." The student must in fact understand that he is for the time being in all respects a workman. Finally, an appeal was suggested to the Indian mercantile community to co-operate with government in giving consideration to the claims of trained men.

After correspondence with the local Governments new rules were framed giving effect to some of these suggestions. Though the rules issued after the close of the quinquennium, they require mention, since the action which led up to them was in progress during the period under review. The maximum number of scholars at any one time in Europe was raised to 30. The scholarships, previously held for two years, might henceforth be held for not less than two nor more than five years. It was advised that this period be preceded and followed by not less than a year's practical work in India, for which purpose local Governments might give scholarships of ₹100 a month before, and ₹150 after, the time spent in Europe. The act of selection was transferred from the

Government of India to the local Governments, who should in future constitute boards of selection. The points to be considered in making choice of a scholar and of an industry were emphasised. The candidate should possess aptitude for the industry and, if possible, suitable academic qualification—ordinarily a degree with science or in engineering. Likely industries are considered to be textiles, mining, pottery, tanning, matches, glass, sugar, pencils and paper. Law, medicine, forestry, veterinary science, agriculture, civil engineering (save sanitary and municipal), geology, the extraction of alkalis and vegetable oil pressing are excluded. The scholarship may in future be reduced on a report from the employer or altogether withdrawn; and a bond must be executed for repayment in case of failure to return to India.

and other scholarships tenable abroad.

358. There are also private scholarships, such as those awarded by the Association for the Advancement of Scientific and Industrial Education of Indians in Bengal, which has sent numerous students to foreign countries. Of these 156 have returned to India and 140 of them are employed.

(b) in technical schools, etc.

359. There is a fairly large number of technical and industrial schools in India. Those so designated number 251 with 12,706 pupils and cost ₹14,70,251 a year. Some of them however are more of the nature of minor schools of engineering than industrial schools, though they ordinarily train a few artisans. On the other hand, a certain amount of industrial training is given in the engineering colleges and the larger schools of art are mainly industrial schools. Nor is it possible to class institutions according to the grade of training imparted. For in many cases a single school offers courses of varying degree in the particular kind of work or in the several branches which it takes up. Generally it may be said that courses preparing students for the highest of the three forms of industrial employment are rare and that schools specialise rather in courses destined to turn out good foremen, etc.

This however is not the invariable rule. There are a few well equipped technological institutes in India, which, when they obtain a student of the right calibre, are capable of fitting him to take a leading part in business concerns. The mechanical and electrical departments of the four engineering colleges present excellent opportunities of industrial training to their students, and the same may be said of some of the schools, such as the Victoria Jubilee Technical Institute at Bombay and the Technical School at Lucknow, though these latter do not profess to offer higher courses. The grade for which an industrial student can be trained depends not merely on the nature of the instruction but also on the capacity and opportunities of the student himself. Some of the schools of art, too, are capable of turning out highly trained products. In especial, the pottery department of the Bombay school of art is deserving of mention. Its main intention is research. It is conducted on thoroughly practical lines, much fine work has been produced and advice is tendered to potteries in different parts of India. A student intending to set up in the pottery business can there see production of specimens fully up to the standard of similar work issued from kilns in Europe and obtain full information regarding the formulæ used. Another scheme, whose want of success is particularly to be deplored at the present time, was that of the tinctorial chemistry classes at Sibpur. These were opened in 1911 experimentally for three years. The class failed to attract students and, though its continuance was sanctioned beyond the expiry of the experimental period, it had to be closed in 1916.

(ii) Intermediate or technical training.

360. The majority of institutions do not pretend to do more than train foremen and artisans. Their classification is difficult; for a single school frequently offers courses in widely different subjects and, as stated above, of varying degrees of value.

(a) in technical schools.

361. Among technical schools of a general kind, mainly for the production of foremen, machinists and fitters, but also for that of men of higher capacity, the chief is the Victoria Jubilee Technical Institute in Bombay. It is managed by a committee. Government contributes a lakh a year to its maintenance, and has also given large capital grants with a view to its removal to Matunga. It offers courses in mechanical engineering, textile manufacture, electrical engineering, technical chemistry and plumbing and sanitary engineering. The course in all departments is four years save that a short hand-loom

course is given for one year. Most of the students who enter are matriculates or have passed the school final.

Two successful institutions in the United Provinces are the technical schools at Lucknow and Gorakhpur. The former has mechanical, automobile and oil engine classes. Its pupils, save in the last mentioned branch, have found suitable employment. Both schools have night classes and both have been engaged on munition work, the Lucknow school having turned out a considerable number of shell-cases. Government maintains smaller schools of a general kind, interesting types of which are the Fuller Industrial schools at Shillong and Kohima.

There are other schools managed by local bodies, private societies and railway companies. As an example of the second class may be mentioned Chengalvaraya Nayakar's Technical Institute at Vepery, managed by Pachaiyappa's Charities, which is the largest school of this class in *Madras* presidency. It includes a variety of classes—for civil and mechanical engineering, woodwork, weaving, oil engines and motor-driving. Another is the Victoria Diamond Jubilee Hindu Technical Institute in the *Punjab*, an aided institution which educates a number of high caste Hindus in mechanical and electrical engineering, motor machinery, etc. The students obtain ready and lucrative employment and some are working as *naiks* in the mechanical transport department. There is also an excellent railway technical school at Lahore. Another aided institution is the *Berar* Victoria Memorial Technical Institute, which has mechanical engineer classes. These institutions often approximate on the one hand to small schools of engineering and on the other to artisan classes. The distinctions fade off into one another, and many of the institutions classed as engineering schools produce foremen and general mechanics.

362. Under this class should be mentioned the training facilities afforded in railway workshops and in government and private concerns. *(b) by apprenticeships.*

Among the larger railway workshops are those at Kanchrapara, Lillooah and Kharagpur in Bengal, Jamalpur in Bihar and Orissa, Lahore, Ajmer-Merwara and many other places. These do not confine themselves to the training of artisans only. The railways are impressed by the desirability of securing an improved local supervising staff and they are just as willing to train Indians as Anglo-Indians.* They realise the importance of obtaining the best available type of boy and select their apprentices on the results of an admission examination. Many of the pupils have passed the European high school examination, the Cambridge examinations or the matriculation (this last qualification is sometimes insisted on), or they have completed at least some part of a high-school course. Sometimes technical schools are attached to the shops; sometimes the apprentices attend classes at a central school. A security deposit is required and the apprentices contribute to a provident fund. As an example of the course, an apprentice at Kharagpur devotes two years to practical mathematics, geometry is introduced in the third year, after which he enters the senior grade where machine-drawing, steam and applied mechanics are taught.

Private concerns, such as the Calcutta Port Commissioners, Messrs. Burn and Co., and others, admit apprentices, who can attend a central school in Calcutta.

There is a small endowment in Assam left by a planter for the maintenance of Williamson apprenticeships. The period of apprenticeship is three years and sometimes a fourth. There are at present 18 such apprentices, of whom 15 are practising in railway workshops.

363. Weaving schools are numerous. The following may be mentioned. *(c) in weaving schools.*

The Victoria Jubilee Technical Institute at *Bombay* has a fine power weaving plant and an expert instructor. The Government Weaving Institute at Serampore, near *Calcutta*, prepares pupils of fair general education as teachers, overseers and managers of hand-weaving factories and also trains actual hand-loom weavers and their children. It is very popular, containing 134 pupils, while about five times that number of applicants have to be rejected for want of accommodation. The pupils appear for the City and Guilds of London Institute examinations and do remarkably well. Repayable advances are given to successful students—not exceeding ₹420 in the case of higher or ₹100 in the case of the artisan students. There are five outlying centres, the cost of which is nearly ₹6,000 a year, while the central institution costs ₹30,000 a year. The dyeing class for artisans is being transferred thither from Sibpur. It is under contemplation to attach peripatetic instructors to the centres. The Institute is hampered by lack of accommodation and Mr. Hornell recommends its removal nearer to Calcutta and the inclusion of cotton and jute spinning by power, jute weaving by power, dyeing by power and hand and cotton, silk and wool weaving by hand. The Central Weaving Institute at *Benares* gives instruction in the hand-loom. An experimental factory has been established in connection with it where demonstrations are given for intending

*Report of a sub-committee recently appointed by the governing body of the Sibpur College.

purchasers of small weaving plants. There is a highly successful dyeing school at Cawnpore with classes for foremen and for artisans. In 1916 there were 92 applicants for admission. Only twenty could be taken as regular students. The students did well at the City and Guilds of London Examination. The eight aided weaving schools in the United Provinces have had varying success. The wealthy weavers are reported to have discouraged the use of the fly-shuttle at one of them, as it threatened to make the poorer weavers independent of them. Four peripatetic weaving schools and a peripatetic dyeing school were started and were so successful that two more such weaving schools will be opened. The Government of *Bihar and Orissa* maintains weaving schools at Bihar, Cuttack and Sambalpur. A weaving class is maintained by local bodies at Raipur in the *Central Provinces.*

There are schools in other provinces also, often run in combination with the small technical schools.

Sericulture and silk spinning and weaving are taught at a new school near Simla and at other centres by the Salvation Army, partly in connection with their work among the criminal tribes. The Salvation Army has also been active in introducing improved looms to the weaving communities.

(d) in mining schools.

364. Mining is taught on the coalfields of Bengal and Bihar and Orissa.

The University of Calcutta offers mining as one of the bifurcated courses leading up to the Bachelorship of Engineering. But the facilities for teaching this course have not been provided. The training of mining engineers now forms a branch of the apprentice department. The pupil takes the sub-overseer course at the end of two years' study, after which he undergoes a further two years' special instruction. The three years' course in mechanical and electrical engineering also (see paragraph 351) is recognised as a qualification for admission to the two years' special course. Further, the reduction of the two years to one year has been sanctioned as an experimental measure in the case of those who have passed the overseer test, provided that the pupil spends at his own cost at least eight weeks of the college vacation at a colliery in order to make up the shortened period which he can spend in the college mining camp.

Instruction is arranged for those who are actually working in mines by means of off-shift classes held at four centres in the coal-fields. These centres are partly in Bengal, partly in Bihar and Orissa. They are controlled by a Mining Educational Advisory Board, which includes colliery managers, inspectors of mines and others. The classes are of two kinds, according as the medium of instruction is English or vernacular. The vernacular classes were started during the quinquennium and their numbers, at first large, have declined to 140. The number in the English classes has risen from 145 to 172.

A special committee was appointed in 1913 to make proposals regarding education in mining. It recommended the establishment of a school of mines at Dhanbad, which would cost 5½ lakhs capital and nearly one lakh recurring. This scheme has been held in abeyance during the war.

(e) in carpentry schools.

365. Some of the smaller technical schools have carpentry classes. An important school in Madras which specialises in this subject is the Anjuman-i-mufid-i-Ahla-i-Islam, where instruction in carpentry is combined with general teaching and carpet weaving is also taught. During the quinquennium the Government of the United Provinces started a Central Wood working Institute at Bareilly. The school has been a marked success. All the pupils who have passed through it are working at their trade, and five have set up shops of their own and are doing well. A feature of the institution is that it not only executes orders but obtains orders for local firms. This has the advantage of putting the school in touch with the local trade, and of indirectly training local labour. For these orders (amounting hitherto to over ₹27,000 in value) are carried out under the supervision of the school in accordance with working drawings and instructions which it supplies, instead of by the haphazard methods formerly employed. It is hoped to introduce a toy making industry into Bareilly. This would provide a use for scrap materials in a place which is a large wood-using centre. There are carpentry schools at Saugor, Dhamtari and Amraoti in the Central Provinces, maintained in connection with missions and the Government School of Handicrafts at Nagpur has a carpentry branch.

(f) in leather schools.

366. Among the proposals put forward by the Madras Industrial Conference of 1908 was the establishment of a leather trade school associated with a small tannery. The Secretary of State sanctioned the school but vetoed the factory. A leather expert was subsequently appointed, who reported that there was not much to be taught to the expert tanners, that it would be more

profitable to aim at improving leather tanned and dressed for use in India and that the school should be worked as a small tannery where the greater part of the two years' course would be devoted to practical work in tanning, currying and dressing and to chemical checks in the laboratory. A leather trade school has accordingly been established at Washermanpet. It is fully equipped with modern machinery and is run partly as a school and partly as a model tannery. The departure of the leather expert interfered with the successful working of the school in the first two years of its existence, but the number of students is increasing every year and useful research is being done at the school into the properties of various tan stuffs which have not hitherto been used. Successful leather schools have been established at Cawnpore and Nagpur, where improved boot making is taught.

367. The institutions for the training of artisans have been described in the preceding paragraphs. This instruction is included even in the engineering colleges, much more in the technical schools. Indeed many of these, such for example as the small schools in Bengal mentioned in paragraph 352, are as much artisan schools as intermediate schools or even more so and admit a large number of artisans provided with stipends by government or the district boards. In Bihar and Orissa there are 21 artisan schools, including the East Indian Railway school at Giridih and the school attached to the Tata Iron and Steel Works at Sakchi. These two institutions carry the instruction rather beyond the artisan stage. There are schools of similar standards elsewhere. *(iii) artisan training.*

V.—Schools of Art.

368. The schools of art in India are largely industrial institutions. There are nine such schools with 1,695 pupils, costing nearly three lakhs a year. *Institutions.*

The principal schools are those at Madras, Bombay, Calcutta, Lucknow and Lahore.

The *Madras* school has departments of wood-work, carpet weaving, metal work, jewellery, modelling, engraving, lacquer work and special painting. It attempts to attract the children of artisans and has latterly been more successful in doing so. The Sir Jamsetjee Jeejeebhoy School of Art at *Bombay*, together with the Reay Art Workshops and the Sir George Clarke Technical Laboratory and Studios, offers instruction in drawing and painting, architecture, pottery (see paragraphs 350 and 359), engraving, copper and brass work, gold and silver work, house decoration, carpet weaving, carpentry, wood carving, embossing of copper and brass, stone carving and iron. A second institution called the School of Drawing and Design, was established by government in 1915 at Ahmedabad. It teaches drawing, painting, pictorial design, workshop drawing and industrial design. The School of Art, *Calcutta*, has, in addition to the elementary department, industrial, draftsman, teachers' and fine arts departments. The School of Arts and Crafts at *Lucknow*, opened just before the quinquennium, teaches art, art painting, decorative design, draftsmanship, house decoration, cabinet construction, ornamental heavy metal work and gold and silver-smiths' work. The subjects taught at the Mayo School of Art, *Lahore*, are very similar and a speciality is made of the classes for teaching instructors of drawing and carpentry, artistic cotton-printing and photo-mechanical processes.

The arrangement of courses in these schools varies; but a typical course, which prevails in some, is two years' elementary instruction mainly in drawing followed by three years' special instruction in the branch which the pupil selects.

369. The admirable work which these schools are doing is perhaps not always appreciated. The name suggests to some that they are mainly schools of drawing and painting, and there is an impression that these subjects are taught upon western lines and lend no encouragement to the further development of Indian art. This is not the case. Whatever may have been the policy in the past, these schools now are attempting to revive the decayed artistic industries of the country. This work has to be done under certain difficulties. In the first place the preservation of Indian art has long been neglected, with the results, as the principal of the Lahore school says, that the educated Indian appears to prefer bad European to good Indian art and affords practically no help in the resuscitation of his own. The principal of the Bombay school says of his students of painting and modelling that they come from the same social class from which university students are drawn and that their eyes have been *The aim of the schools.*

accustomed from early childhood to see nature through the illustrations in school books and other works, drawn according to western conventions, with the result that they can hardly be made to imitate the style of Indian pictures. Herein they merely reflect the taste of the cultured classes, whose houses are frequently full of European pictures possessing no artistic value whatever. Second, a return to the old Indian methods does not always receive encouragement from the patrons of the arts, since these are not prepared to buy productions of this nature. This difficulty, however, is not experienced in all parts of India and is certainly absent in Bengal. Third, with a view to teaching good art (which after all is presumably the main object, whether that art be denominated western, eastern or by any other name), it is necessary so far as possible to discard the conventions which are apt to interfere with the production of the best form. The shortcomings of Indian methods must be corrected by studies from life upon western methods. Decadent tendencies require an infusion of energy and accuracy, but without undue influence on the traditional bent of the Indian learner in the matter of essential principles. For Indian art in the proper sense of the word is a matter of principles and not of mere manner; and, if the spirit be there and can find its true expression, the art will remain Indian whatever be the medium or the technique of that expression. It is equally necessary to shake off the trammels of western conventions with a view to placing the feet of the student upon the path of progress and building up a school of living rather than of imitative art. This point is apt to be forgotten by critics who observe a class of Indian students drawing from a model in accordance with the canons of proportion, perspective and anatomy. Instruction in the more modern methods of western art will here help rather than hinder the Indian student. The principal of the Lahore school says that the whole system of teaching drawing in that institution has been brought into line with western methods as they are now, which are much more in sympathy with eastern traditions than is the old South Kensington system of mechanical copying of nameless forms and decorative pattern charts which had been rooted in the country for forty years. While therefore instruction in drawing according to the western methods (if indeed that term can properly be used) forms an integral part of the course in these schools, the aim, as stated in the Madras report, is to conduct them as much as possible with a view to the preservation of Indian art. As a matter of fact the more advanced student is generally allowed to follow his own bent, as in the Calcutta school. In that school the fine art department has produced a more distinctly eastern type of painting than is found elsewhere and the works of Abanindra Nath Tagore and Nanda Lal Bose are well known. This tendency in Calcutta has been encouraged by the proximity of the splendid collection of Indian pictures in the Indian Museum, which permits of a comprehensive study of the historical schools of Indian painting and drawing. Others have shown distinct success along western methods, especially in water colours, though one of the principals complains that the Indian artist often lacks concentration and fails to fulfil the hopes of original work of a high standard which his student days would seem to justify. It is difficult to see what will be the future development of Indian art, especially on its pictorial side. It is not clear, for instance, whether the style developed in Calcutta will take root and grow. In the meantime, however, much may be done by the study of old patterns shorn of their less pleasing conventions, and the revival of true methods through a return to the models afforded by nature. An inspection of any collection of products of one or other of these schools, especially in wood carving, brass work, etc., would certainly convey the impression that no small success has hitherto attended the efforts made in this direction.

Art pattern books.

370. In pursuit of the policy to develop Indian art along its natural lines and as the result of a conference of the principals of schools of art held in 1907, a scheme of producing art pattern books was framed. The object of this scheme is the preservation of historic designs of various art industries by means of carefully prepared drawings of indigenous patterns. The work has involved considerable labour, the artists employed travelling into remote parts of the country in search of good examples. Sets of plates have already been produced dealing with silver work in Bengal and Assam, ivory carving in Bengal, metal work and decorated cottons in Madras. The publication of

a third book for Madras is under consideration; it will deal with minor industries such as ornamental weaving, ivory, horn and tortoise-shell work.

VI.—Industrial schemes and their result.

371. While instruction in engineering in India is now proceeding on fixed and regular lines, the foregoing description might, so far as industrial education is concerned, seem to indicate a mass of more or less useful institutions organised on no concerted plan. It is true that industrial education has not yet passed the empirical stage. But the institutions enumerated, though some of them no doubt in the first instance grew up in a haphazard fashion, mainly represent the crystallised residue (the unkind might be tempted to say the *disjecta membra*) of a number of carefully considered schemes. If the residue is small and if many of the component parts of those schemes have evaporated into air, that is merely indicative of the difficulty which involves the subject, the paucity of funds and the hesitation which naturally prevails in tentative enterprises. *Industrial schemes.*

372. The first serious attempt to organise industrial education was made by Lord Curzon, who appointed a roving committee to examine the subject. The committee suggested an apprentice system. The Government of India, disagreeing with it, advocated trade schools of various grades and referred the matter to local Governments. Then followed a period of almost feverish activity. Between 1907 and 1911 every local Government appointed a committee; and many schemes, involving the foundation of schools of a higher grade than the trade schools contemplated by the Government of India, were set on foot. Some of these were too costly for immediate realisation, others were found impracticable and had to be modified and others again have survived. Three of these schemes are particularly noteworthy in the light of subsequent developments.

The Naini Tal conference of 1907 recommended a director of industrial enquiries, a technological institute, a school of design, an experimental weaving station and a carpentry school. Portions of this scheme materialised. Difficulties arose over other portions. The local Government, after further enquiries, slightly modified the scheme in a resolution of 1914. The general result has been the creation of a directorship of industries and the establishment of the Lucknow and Gorakhpur technical schools, the Lucknow arts and crafts school, the Bareilly carpentry school and the Benares weaving station. These have relieved the college at Roorkee of the bulk of its industrial side, which, it was correctly judged, would flourish better when divorced from the engineer department. But the scheme of the Cawnpore Technological Institute, which was to form the industrial pendant to the engineering college at Roorkee in the general scheme of technological studies, has encountered difficulties. First, it was felt that there was no room in the province for a large institution teaching the application of science to a variety of industrial arts and that it was useless to produce trained men who would find no real place in the commercial system of the country and must therefore revert to some form of employment which did not give full value to their training. Second, the recruitment of a principal possessing all the qualifications originally contemplated was found impossible; the services of a man of more general qualifications were accordingly sought, but, owing to the war, could not be obtained. Hence it was decided in 1914 that the primary business of the institute should be research with a view to the improvement of existing industries; and, while its laboratories have been busy, but little progress has been made in the absence of a principal.

The Ootacamund conference of 1908 likewise recommended the creation of a directorship of industries (which has come to pass) and two kinds of institutions, one to teach the performance of actual processes, the other to teach the application of principles to practical purposes. It also made an important recommendation regarding the tentative pioneering of industries, on commercial lines but with the object of demonstration, in factories connected with schools. Lord Morley negatived this proposal and stated that the policy which he was prepared to sanction was the expenditure of State funds upon familiarising the people with such improvements in the methods of production as modern science and the practice of European countries could suggest but that it must be left to private enterprise to demonstrate that these improvements can be adopted with commercial advantage. The Government of Madras made a further representation regarding these orders. In reply Lord Crewe considered that too limited a construction had been placed upon the terms of the orders and recognised that in certain cases instruction in industrial schools may be insufficient and may require to be supplemented by practical training in workshops where the application of new processes can be demonstrated. He considered that there was no objection to the purchase and main-

tenance of experimental plant for the purpose of demonstrating the advantages of machinery or new processes and for ascertaining the data of production.

In the meantime two important schemes were put forward for the development of industrial education. One was for the establishment of State apprenticeships in Madras city. The idea of State apprenticeships has been dropped, but the scheme has borne fruit in the establishment in Madras of a government trade school, where continuation classes are provided for apprentices and workmen in the employ of different firms. The school opened with classes in plumbing and mechanical engineering and the results of the past year's work were so encouraging that additional classes in electric wiring, machine drawing and other subjects have since been added. The other scheme was for the development of the Board Technical Institute at Madura. The institute was taken over by Government and a new institute is in course of construction. The institute will be divided into three sections—weaving, dyeing and mechanical engineering.

The history of affairs in Bengal is mainly of later date, though it originates with two events which took place in the previous quinquennium or even earlier. One was the proposal, first mooted in 1905, to remove the engineering college from its site at Sibpur, which was emphatically reported as unhealthy, to Ranchi. The other was an industrial conference which took place at Dacca in 1909 and proposed the formation of a department of industries for Eastern Bengal and Assam and a central institute at Dacca with demonstration factories. This scheme was generally approved by the Government of India. The sale of the Sibpur site to the Calcutta Port Trust was settled, and preparations began at Ranchi for the housing of the engineering college and its technological department. But Ranchi is not a centre of industries, and the Government of India, before referring the matter to the Secretary of State, asked whether the technological department could suitably be established in Calcutta. The re-partition of Bengal took place in 1912 and the Imperial Secretariat in Calcutta was left vacant. A committee framed an elaborate proposal for the technological institute in this building at a capital cost of over 10 lakhs and a recurring cost of 5½ lakhs. In the same year the Dacca University scheme was set on foot and the committee which reported on it recommended the inclusion of an engineering college to cost nearly 7 lakhs capital and over one lakh recurring. Thus Calcutta would have its technological institute and Dacca its college of engineering together with the industrial factories proposed in 1909. But the idea of the removal of the engineering college from Sibpur aroused some local feeling in Calcutta, a resolution on the subject was moved in the Bengal Legislative Council in 1914 and the local Government undertook not to settle the question until the Royal Commission on the Public Services in India had considered the subject of the training of engineers. The sanitary conditions of Sibpur are now undergoing re-investigation. As to the industrial side of the question, the committee which considered the Calcutta technological institute scheme had recommended the appointment of two directors of industries, one in western, the other in eastern Bengal, and both subordinate to the director of public instruction of Bengal. The Bengal District Administration Committee of 1913 upset this recommendation and thought that there should be one director of industries, that expert managers from Europe should be engaged who would carry out demonstration enterprises under his supervision, and that industrial development and education (as apart from technical) should be removed from the control of the department of public instruction. Finally Mr. Swan was deputed to report on industries in Bengal, and, in 1915, the local Government asked for the appointment of a director of industries who would work under the commercial department. This officer has not yet been appointed.

The characteristic of the 10 years previous to the present quinquennium was the initial formation of schemes. The discussions which took place immediately before and during the present quinquennium were either, like that in the United Provinces which culminated in the resolution of 1914, revisory of previous schemes or, like the Atkinson-Dawson and Morison Committees and the schemes put forward in Bengal, centred round particular institutions or special aspects of the subject.

Difficulties in the way of industrial education.

373. Industrial education in India has hitherto attained only a limited measure of success. The reasons for this, partly as elicited from certain of the Directors by the Indian Industrial Commission now sitting, appear to be as follows. First, a competent directing and controlling agency is too often lacking. Financial and other difficulties militate against the employment of permanent inspectors. The attractions of business deter industrial experts from accepting the limited career afforded under government employ, or if they accept, make them ready to relinquish it. This remark applies to the agency of higher instruction as well as to that of direction. Second, the industrial schools are limited in their scope and in the minor schools the teachers are often ill-qualified, ill-paid, and averse from practical demonstration. Third, the schools often fail to attract the right type of student. The

better class student prefers the safe and conventional career of a high school and a college, followed by the chance of government employ or the possibility of success in a learned profession. If there were existing business concerns, for a position in which a student could qualify himself by education, he might be expected to choose a technological institute. But this is often not the case, and it is too much to expect the student himself to create his business. The craftsman class is beginning to frequent the schools in greater number but hesitate to take full advantage of them owing to a fifth consideration. This is that their aim, though it has often been defined, still lacks absolute clearness. The school may prepare the artisan for the prosecution of an industry as it at present exists. But this instruction can be more effectively obtained by home-teaching. It may teach him advanced methods, dependent on power rather than hand, etc. But it would not pay the craftsman to employ such means, even if he possessed the necessary capital. It may attempt to give a wider and more thorough training. But the demand is limited, the boy requires only the specialised craft, and, while he can learn this quickly from his father, it appears to him waste of time to spend a longer period at school. Sixth, so long as the idea persists despite proofs to the contrary, that theoretical knowledge should qualify a student to stand at once on the higher steps of the industrial ladder, without the laborious trial of apprenticeship and practice, it will continue to depreciate industrial education in the eyes of the student and to damage the industrial student in the eyes of the public. Finally, there is the continual lack of funds. The popular cry is for the expenditure of more and more money on technological education. But such schemes are not always ready, or, if ready, easy of realisation in view of difficulties of staffing, etc. The cry for more high education of a literary type is equally insistent and much easier to satisfy. The rising flood of secondary schools and colleges sweeps away the funds before they can be secured for the development of industrial instruction. Hence arises hesitation regarding large outlay on this object, especially in view of the just though less clamant demands for mass education.

The measure of achievement.

374. These are the difficulties, expressed in their extreme form. On the other hand, no one who visited the technical and art schools of India, twenty, ten or even five years ago and who revisits them again to-day, could fail to be struck by signs of remarkable improvement. The staff is better qualified, the equipment is often as good as can be shown by similar schools in other countries—sometimes better. A more suitable class of students is attracted, whether from the middle or the craftsman communities. Practical work more and more dominates the curricula. Above all, there is a good spirit in these schools, and work goes with a will. The picture therefore, although not so rosy as one would wish, is by no means hopeless. The various projects described in the preceding paragraphs may appear to have ended (save in the United Provinces) in but little achievement. But the path of industrial education must necessarily be beset by the clash of opinions, obscured by many blind alleys and strewn with many failures. Out of what may appear a welter of conflicting schemes order is gradually and with difficulty shaping itself. Organisation is improving. Thanks to the growth of properly staffed departments of industry, the formation of committees and the utilisation of expert opinion and business experience, the institutions are adapting themselves to cater for surrounding industries. Some of them, notably the Victoria Jubilee Technical Institute, the schools in the United Provinces, the railway technical school at Lahore, the schools of art and others, are undoubtedly doing good service. Instruction is growing more practical and the necessity for this is coming to be publicly realised. The work turned out is increasing in excellence. On the artistic side better ideals are placed before the students. Employment is generally forthcoming, though this is not invariably the case. Even if some indefiniteness of aim still exists, the schools are coming to realise in detail the requirements of the craftsman and consequently they prove more attractive to his children. With an Industrial Commission now considering this among other problems, no prophecy can be attempted as to future developments of industrial education in India. On one point however there can be no doubt. This is the dependence of industrial education in India for its efficacy and of industrial development for its success upon the

work of the common primary and secondary schools. Improvement in these institutions will lay the most solid foundation for improvement in special institutions. Mr. Hornell emphatically voices this when he says, "My own view is that until we have laid the foundations of a reasonably efficient system of primary and secondary schools we ought to scrutinise most jealously every rupee that it is proposed to spend in the field of university and higher technical education."

CHAPTER XIII.

TRAINING OF TEACHERS.

I.—General.

Organisation. 375. The training of teachers is naturally divided into English and vernacular. Trained teachers of English serve in secondary schools; trained teachers of vernacular serve mainly in primary but to some extent also in secondary schools.

Teachers of English are trained for the most part in special colleges, which prepare candidates for university or departmental examinations. The courses vary accordingly as they are framed for graduates or undergraduates. Teachers of vernacular are trained in normal schools or in training classes. The latter impart a less complete training.

This general organisation is more or less followed in the majority of provinces, with local features which will be described later. In Madras and Burma, however, the system conforms less nearly to this type and the distinction between English and vernacular training institutions is less marked.

Management. 376. Nearly all the colleges and nearly half the training schools are maintained by government. An almost equal number of schools are maintained by boards. Only four colleges and 74 schools are under private management.

Inspection. 377. As stated in paragraph 95, the larger provinces often have special inspectors of normal schools, who sometimes also inspect European schools.

II.—Figures of institutions and pupils.

Institutions and pupils. 378. The total number of institutions in India, for men and women, has risen from 587 to 816; that of students in them from 13,425 to 19,396. Institutions for men have increased from 500 to 702 and male students from 11,812 to 16,583. Institutions for women have increased from 87 to 114 and female students from 1,613 to 2,813. Attendance is 90·6 per cent. as against 87·2 per cent. in 1911-12.

Among male students, the largest number is drawn from non-Brahman Hindus (6,745), next come Brahmans (4,676) and then Muhammadans (2,933).

The distribution by provinces is shown in supplemental tables 127 to 131 and 134 to 138.

In point of institutions, the United Provinces heads the list with 299. This represents an increase of 163 over the figure of 1912, due to the opening of a number of small training classes. Bengal and Bihar and Orissa come next with 139 and 133, largely made up of *guru*-training schools. Madras has 125—an increase of 39. Bombay and the Punjab have 43 and 32. The numbers in the other provinces are small, in no case exceeding twelve.

In point of students, Madras stands easily first with 5,784 and an increase since 1912 of 2,412. Next are Bengal and the United Provinces, with 2,689 and 2,643, but with this difference that the number in the former province has increased by only 105 and that in the latter by 1,288. Bihar and Orissa and Bombay show 2,382 and 2,178 students, the increase in Bombay amounting to 470. In the Punjab there are 1,446—an increase of 671 since 1912. The Central Provinces has 781, Burma 707, Assam 516 and the North-West Frontier Province 75.

Still surer ways of judging the progress of different provinces are the comparisons of expenditure made in the next paragraph and of trained to untrained teachers in paragraph 383. The latter comparison shows that, among the larger provinces, the Punjab, the United Provinces and Madras have made the greatest numerical progress, while the North-West Frontier Province and the minor administrations also have satisfactory percentages of trained teachers.

III.—Expenditure.

379. The total expenditure on all training institutions has risen from ₹21,66,007 to ₹33,89,790—that on institutions for men from ₹17,76,193 to ₹27,36,954 and that on institutions for women from ₹3,89,914 to ₹6,52,836. *Expenditure.*

During the quinquennium small imperial grants were allotted wholly or partially for training. At the close of the period, a further recurring grant of 30 lakhs was announced, to take effect in 1917-18, for the training and the pay of teachers.

The expenditure in each province, its ratio to the total direct expenditure on education and the amount expended on training per head of the school population in public institutions, are as follows :—

—	Expenditure from all sources on training.		Percentage of expenditure on training to total direct expenditure on education.		Amount of expenditure on training per head of school population in public secondary and primary schools.	
	1911-12.	1916-17.	1911-12.	1916-17.	1911-12.	1916-17.
	R	R			R	R
Madras	4,35,634	9,50,230	4·6	6·2	·38	·63
Bombay	3,13,430	4,37,447	2·9	3·5	·38	·60
Bengal	3,82,399	4,83,936	3·2	2·8	·25	·27
United Provinces	2,52,663	4,14,993	3·8	4·3	·41	·53
Punjab	1,19,711	3,12,813	2·8	4·5	·39	·76
Burma	1,79,635	2,01,398	5·8	4·4	·67	·52
Bihar and Orissa	2,49,866	3,19,364	6·4	5·4	·36	·43
Central Provinces and Berar	97,895	1,54,202	4·3	4·5	·31	·45
Assam	35,979	50,701	3·4	2·9	·21	·23
North-West Frontier Province	15,312	32,631	6·1	5·3	·60	·80
Minor Administrations	3,483	32,075	5·7	2·8	·56	·79
INDIA	21,66,007	33,89,790	4·02	4·3	·37	·48

In point of expenditure Madras easily leads the way; and the annual outlay in that presidency, the Punjab and the North-West Frontier Province has more than doubled during the quinquennium. The great increase among minor administrations is due to the inclusion of new areas in the statistics. The percentages of expenditure and the averages of expenditure per head of school population are interesting; but care must be used in drawing inferences. Thus, the increase in Madras is masked by the general increase in educational expenditure and the growth of the school population, and similar reservations must be made in the case of other provinces in view of the costliness of education or the comparative paucity of pupils.

380. The changes in the incidence of expenditure have been as follows :—

	1911-12.	1916-17.
	₹	₹
Provincial funds	17,98,768	27,36,994
Local funds	1,47,125	3,68,806
Municipal funds	9,191	23,626
Fees	34,114	45,915
Endowments, subscriptions and other sources	1,76,809	2,14,449
TOTALS	21,66,007	33,89,790

The most noticeable feature is the increase of over 9⅓ lakhs in the annual expenditure from provincial revenues.

Average cost of a pupil teacher.

381. Fees are not ordinarily charged in training institutions. On the contrary, stipends are generally given to the students either by government or by the local bodies or other authorities in whose service they are already employed or are likely to be employed—a fact which adds very greatly to the cost of this type of education. The average cost per student is as follows.

	AVERAGE COST PER STUDENT IN 1911-12 IN		AVERAGE COST PER STUDENT IN 1916-17 IN	
	Training College.	Training or normal school.	Training College.	Training or normal school.
	R	R	R	R
Madras	351	123	683	158
Bombay	1,065	166	1,273	188
Bengal	1,009	124	999	151
United Provinces	732	155	687	133
Punjab	422	168	429	155
Burma	..	394	..	284
Bihar and Orissa	2,428	105	1,585	128
Central Provinces and Berar	767	179	722	151
Assam	..	90	..	103
North-West Frontier Province	..	260	1,554	252
Minor Administrations	..	166	..	169
INDIA	564	144	685	157

The cost in the two types of institution may be taken as roughly representing that of training a teacher of English and that of a teacher of vernacular. But, owing to varieties of system, this division is only approximate; some schools impart instruction to teachers of English and, as seen in the case of Burma, their cost is comparatively high. The great variation in the cost of college education is largely due to the differences in policy regarding the numbers admitted.

IV.—General developments.

Measures of improvement.

382. On the 30th August 1916, the Government of India issued a circular letter to local Governments pointing out the inadequacy of the arrangements in many provinces for the training of teachers for secondary and primary schools and suggesting as a minimum standard that the number of teachers to be trained in each year should not be less than the number of new teachers whom it is necessary to provide in order to take the place of those who have died or resigned or in order to meet the demands created by the extension of

education. This circular was followed by the announcement of the 30 lakhs grant.

Considerable improvements had already been effected. New institutions have been opened, courses re-adjusted and stipends raised. But no improvement in the training institutions can be effective unless the prospects of the teachers' profession are sufficient to attract an adequate number of candidates of the proper stamp. The increase in the pay of staff, especially of trained staff, which has already been described, is in part responsible for a readier flow of prospective teachers into the institutions. In Madras the applications for admission generally far exceed the number of vacancies, though the quality of the applicants still leaves a good deal to be desired. In the Punjab, there were 481 applications at the Central Training College, Lahore, of whom only 149 could be admitted, nor, save in one division, has there been any dearth of candidates for vernacular training in that province. In Bihar and Orissa the demand for admission to the first grade training schools is very great. The Bhagalpur school accommodates only 75 students whilst the average number of applicants seeking admission during the three years of its existence has been 250. In the North-West Frontier Province also a large proportion of the applicants had to be refused for want of accommodation.

383. Nevertheless, the number of trained teachers in most provinces is still inadequate. This is shown in detail in general table IX and in percentages in the table below. *Inadequacy of number of trained teachers.*

	Percentage in 1911-12 of trained teachers.	Percentage in 1916-17 of trained teachers to staff among		
		Teachers of English.	Teachers of vernacular.	All teachers.
Madras	39·5	39·3		39·3
Bombay	30·2	21·7	37·8	35·5
Bengal	12·4	2·8	19·8	16·5
United Provinces	34·9	23·4	44·1	41·4
Punjab	46·5	55·7	56·7	56·5
Burma	21·7	79·7	19·8	26·1
Bihar and Orissa	14·1	6·8	23·5	22·5
Central Provinces and Berar	28·1	24·7	35·0	33·9
Assam	37·0	9·5	40·1	37·2
North-West Frontier Province	46·6	47·1	43·4	43·9
Minor Administrations	..	44·7	46·6	45·6
INDIA	26·5	32·6	30·8	31·4

The inferences to be drawn from this table have already been stated in paragraph 378. It is remarkable that in Bengal, where secondary education is so widespread, the percentage of trained secondary teachers should be negligible. Till a comparatively recent date, no facilities for English trained teachers existed there.

384. The magnitude of the problem may also be seen by considering the number of trained teachers required and the annual out-turn. There are at present 93,409 teachers of English and of classical languages and 187,329 teachers of vernacular, or a total of 280,738. If the wastage be computed at 6 per cent. per annum, the training institutions should turn out 16,844 teachers a year. The number actually under training is 19,396, and the course for many of these is of two or even more years. The number who passed the examination from colleges or secondary training schools in 1916-17 was 2,073, and of those who passed from primary training schools was 9,411, or a total of 11,484. Hence there is an annual deficit of 3,532 teachers below the number

required for keeping up the supply of teachers of English, of 1,828 for keeping up that of teachers of vernacular and of 5,360 for the total supply. Over and above this, the number already trained is only 30,480 in the case of teachers of English, 57,689 in that of teachers of vernacular and 88,169 in the total. Hence, in addition to the supply of wastage, there is heavy lee-way to be made up, amounting respectively to 62,929, 129,640 and 192,569 untrained teachers under each of the three heads. The Government of India, as already stated, favour concentration upon the repair of wastage and provision for expansion. The recent imperial grant may be expected to produce considerable results, as regards both the increase of facilities and the formation of a permanent and contented profession. Whether the ideal of every teacher a trained teacher is attainable depends largely on the finances of the future. For the present, all that can be done is to go on increasing the percentage of qualified teachers as fast as possible and to trust that, where untrained men must still be employed, they will at least benefit from the tradition created by an increased number of trained colleagues.

Courses.

385. Information regarding institutions and courses is given separately for English and vernacular training institutions. But it will be convenient to note here the general trend of changes in the courses and the system of stipends which is common to both grades. Where changes have occurred in the courses they have been in the direction of specialisation and a more practical form of training. The Universities of Madras and the Punjab and to some extent Allahabad permit of such specialisation. In Madras the department has attempted to train teachers more directly than heretofore for their work in schools, while specialisation has been facilitated by the appointment of a better qualified staff. The Bombay report notes the introduction of advanced drawing and clay-modelling, nature study, school gardening and sloyd. Manual training is also taught at the colleges in Madras and Allahabad and in some other institutions. In Burma the new regulations constitute a pronouncement in favour of sequence of teaching, a higher standard of general education combined with shorter training being now required in the case of some of the courses. A matter for consideration is the short period of training ordinarily prescribed, especially for teachers of English. This is regretted in some quarters; and Mr. Richey has no doubt that during a one year's course, which includes a great deal of theoretical study, sufficient time cannot be found for actual practice in teaching.

It is also worth noting that a practising or demonstration school is an invariable accompaniment of training institutions of all kinds in India. Either a special school is started close to the institution, or arrangement is made for the utilisation of one or more neighbouring schools for this purpose, or both plans are followed.

Stipends.

386. Teachers or students undergoing training ordinarily receive either the pay of their post or a stipend. These are given either by the government or by the employer. The government stipends have to some extent been raised during the quinquennium as they were insufficient in some provinces to attract students. The variation in rates is considerable, higher stipends being ordinarily given in places where it is difficult to find persons of the proper qualifications. The highest stipend in institutions of the collegiate grade is given in the Central Provinces, where a graduate receives ₹45 a month and an undegraduate ₹30. In Madras the scale runs from ₹15 to ₹35 in special cases. In Bengal, the United Provinces and Bihar and Orissa the rate is ₹20 for a graduate, ₹15 for an undergraduate. In the Punjab the rate varies from ₹12 to ₹15 and ₹18 according as the student is in the junior or senior Anglo-vernacular class or in the Bachelor of Teaching class. As regards schools, the scale generally runs from ₹5 to ₹10, though students preparing in schools to be secondary teachers in Madras receive ₹12. In the eastern provinces the stipend given in first grade training schools is often lower than that given in the inferior training schools called *guru*-training schools. The rate in the former class of institutions in Bihar and Orissa is ₹6 in the case of boarders and in Bengal from ₹6 to ₹10. In the latter case the usual rate is now ₹10. The reason is that the student in the higher institution is ordinarily fresh from school, and should he pass his examination

will secure a rate of pay moderately commensurate with his age. The student in a *guru*-training school is usually already an employee and may be a family man of some age; he has little to look forward to save the small pittance obtainable at a primary school; hence he must be attracted to and supported at the training school.

A student is ordinarily required to serve as a teacher for a certain period under penalty of refunding the cost of his training or his stipend.

V.—English Training Institutions.

387. Colleges for the training of teachers of English number 15 and their students 765. This, however, does not exhaust the full number of institutions which train teachers of English, since some are classed as schools and may contain vernacular as well as English classes. *Institutions.*

The following brief description of institutions indicates the main changes which have taken place during the quinquennium. It deals only with colleges for men. Those for women are described in chapter XIV.

Teachers' College at Saidapet near *Madras* is a successful institution of long standing. The amount of practical teaching work arranged for the students is said to be inadequate. The students read for the licentiate of teaching offered by the Madras University. A class for the same course has been opened at St. Joseph's College, Trichinopoly. The increasing demand for licentiates has led government to arrange for the re-opening of the Rajahmundry Training College. The number of secondary training classes has risen from four to five and of higher elementary from 13 to 21. The secondary Training College at *Bombay* has no building of its own and is held in two class-rooms of the Elphinstone High School, with accommodation for only 34 students. Most of these have already been employed in government schools as probationers for a year—an arrangement which the principal deprecates. Nor is the principal satisfied that all the candidates at the examination (which in Bombay is a departmental test) deserve the success which they achieve on paper. The whole question of the extension of facilities to teachers in privately managed schools is engaging the attention of the department. In *Bengal* there are three colleges, the David Hare College, Calcutta, and the Dacca Training College (both government institutions) and the London Missionary Society's College, Calcutta (aided). All three colleges are affiliated to the University of Calcutta, the first two for the degree of bachelorship of teaching. For the two government institutions the accommodation is inadequate and a new site has been selected for each. The Hare College teaches the B. T. course, the Dacca College the B. T. and L. T. courses, and the Mission College the L. T. course. The numbers in these institutions are 27, 59 and 7, respectively. The details of the courses, which are laid down by the university, are said to be very imposing and too comprehensive in character, and although admired in some quarters, are open to serious criticism. The work consequently suffers from superficiality. *The United Provinces* has two colleges—one at Allahabad which trains graduates for the university licentiate of teaching and another opened before the quinquennium at Lucknow for the training of undergraduates in a departmental course. A third is contemplated at Agra. The existing colleges are doing useful work, though the former attracts mainly holders of third class degrees and at the latter stipends have had to be raised to ₹15. In the *Punjab* the university offers a degree of bachelor of teaching for those who, having obtained a degree in arts, read for one year in a training college. The department also offers a senior Anglo-vernacular course of one year to those who have at least studied up to a degree, or have passed the intermediate and the junior Anglo-vernacula examinations. The only institution which teaches these courses is the Central Training College at Lahore. This is a large, popular college, with both English and vernacular classes. "It still remains," says the report, "the only source of supply for English trained teachers for the senior classes of high schools, and for the higher grade of vernacular teachers." But it is unable to receive the large number of applicants for admission and a second training college is contemplated at Jullundur. Its opening was postponed owing to the war. But it is hoped to make a beginning with the recent imperial grant. In the meantime, a junior Anglo-vernacular class has been opened at the Islamia College, Lahore, the course being a departmental one of two years for matriculates; and four local classes for the training of matriculates have recently been attached to high schools. These last have trained 150 students; but the value of the training is said to be dubious. *Burma* possesses no college for teaching the university course, but some of the normal schools train Anglo-vernacular teachers—to the number of 183 males and 124 females. At the beginning of the quiquennium *Bihar and Orissa* possessed a training college; but it taught only up to the licentiate of teaching of the University of Calcutta and contained but twelve students. A large scheme was formulated and carried into effect in most of its essentials during the period. The college is now adequately housed, offers the bachelorship of teaching course and in 1915 admitted 40 students. But the war necessitated a

curtailment in the number of stipends; and the college has hitherto confined itself almost solely to training government employees. The Jubbulpore Training College in the *Central Provinces* was opened just before the quinquennium. It prepares graduates for the licentiate of teaching of the University of Allahabad and undergraduates for a departmental diploma. Assam has no provision for teachers of English, save a reservation of 19 vacancies a year at the Dacca Training College. In 1916 the Normal School at Peshawar in the *North-West Frontier Province* was transformed into a training college by increase of the staff and addition of a junior Anglo-vernacular training class.

The other administrations possess no facilities of their own and depend for their supply upon the institutions named above. Institutions for training women teachers are described in paragraph 435.

Staff.

388. The staff of a training college ordinarily consists of one or more members of the Indian educational service together with members of the provincial and subordinate services.

Courses.

389. As will already have been observed, the courses are of two kinds - university and departmental. All universities save Bombay have instituted such courses, leading up to degrees or diplomas, for those who have previously obtained an ordinary degree. The University of Calcutta also offers a course for those who have passed the intermediate Departmental courses are ordinarily (save in Bombay) intended for those whose academic qualification is lower than the degree.

The *Madras* university course for the licentiate of teaching is of one year's duration and comprises human physiology, psychology, the nature of knowledge, the method of teaching English and any one of the several special groups of subjects, and practical training. It was lightened during the quinquennium by the omission of the history of education as a separate subject and the relegation of the methods of teaching young children from the compulsory to the alternative list. The departmental course for secondary training schools is intended for those who have passed the matriculation, or an equivalent examination or who hold the secondary school leaving certificate. It also is of one year and is of a practical character, involving instruction in organisation, discipline and moral training and teaching. The departmental course in *Bombay* is of one year. The students are not encouraged to study general educational problems save in connection with the history of education—especially that of Indian education; and the only books prescribed are one on educational reformers and another on psychology. General reading is encouraged and courses of lectures are delivered on school equipment and method. Weekly essays, black board drawing, phonetics, elocution, model and criticism lessons complete the course. In *Bengal* and *Bihar and Orissa*, the Calcutta university course is followed in the case both of graduates and of undergraduates. The degree of bachelor of teaching can be taken a year or more after the completion of an ordinary degree and includes the theory and practice of teaching in relation to mental and moral science, method and management, the history of educational ideas and an educational classic. A candidate must also have undergone a course of practical training for six months at a training school or have served as a teacher for a year. In addition to written papers, a practical test in teaching forms part of the examination. The course for the licentiate in teaching is similar, save that the history of educational ideas is not prescribed and that it comprises study in modern English. Mr. Hornell writes as follows about the Calcutta courses, "the details of the courses as laid down are very imposing. They have, in fact, been much admired in America, but they are open to serious criticism on practical grounds, as experience covering nearly a decade has shown. Considering the marked difference which in the majority of cases exists between the mental calibre of graduates and that of men whose general education has come to an end at the intermediate stage the courses laid down for the degree and for the diploma are too much on a level. The aim of the higher course should be not only to secure that the B. T. is equipped as a competent class teacher, but also to secure that he understands the principles of teaching, the classification and discipline of school children, the organisation and purpose of games and other kinds of physical exercise, the control of a small office and that he has a sound conception of the purpose and organisation of educational machinery in a modern State. The aim of the lower course should be much less ambitious, namely, to equip an assistant master in a high school to do the work of a class teacher thoroughly well and to obey instructions in all other branches of school work with intelligence." He also says that the courses are far too comprehensive in view of the fact that the period allotted does not really cover more than eight months, several weeks of which "have to be spent in convincing students that they are not heaven-born teachers." The history of education as prescribed for the B. T. is nothing less than a history of civilisation, requiring in the student a knowledge of the social life of various countries, whereas many students come up ill-equipped in the knowledge of ordinary school subjects such as geography. The licentiate of teaching of the University of *Allahabad* is open to graduates who have pursued a further

year of study. Emphasis is laid upon a practical test in teaching, and some measure of specialisation is permitted in the choice of subjects for this test. There is also a departmental course for undergraduates. A candidate for the bachelorship of teaching in the *Punjab* University must have passed the ordinary degree and have studied for a further year the psychological, logical and ethical bases of education, the principles of school management, the theory and practice of teaching and the special methods applicable to one of these branches of study. The departmental courses are the senior and junior Anglo-vernacular. The former is open to those who have at least read up to a degree or have passed the intermediate in the first division and obtained the junior certificate. It is of one year's duration and is based on the teachers' diploma course of Birmingham University. The latter is open to matriculates, lasts for two years and comprises general as well as professional studies, carrying the student forward to the standard prescribed for the intermediate. *Burma* does not present candidates for the Calcutta University examinations, but has framed courses of its own, a feature of which is that the candidate pursues his ordinary studies while undergoing professional instruction. The organisation has been considerably changed during the quinquennium. There are three grades of Anglo-vernacular certificate—the high, the middle and the primary. At the beginning of the quinquennium the candidate for a high certificate must have passed the matriculation or the high school final and have studied for three years. Candidates for either of the other grades of certificates must have passed the middle standard and studied for two years, the difference in the grade of certificate depending not on original qualifications or special courses but on the attainment of the candidate as shown at examination. In 1916 the period for the high certificate course was reduced to two years, or, in the case of those who had previously passed the intermediate, to one year. The qualification for entering the middle certificate course was raised to the matriculation or high school final and the period of training was reduced to one year. The regulations for the primary certificate course remained unaltered. The professional part of each course includes general principles, methods, organisation and class management; psychology and the history of education are added in the high certificate course. At the conclusion of the course, a candidate undergoes the departmental test in general subjects (in the case of girls the intermediate in arts of the University of Calcutta is substituted for this) and practical work, and the Educational Syndicate's examination in the theory of education. The certificates qualify the holders to teach in the high, middle and primary departments respectively of Anglo-vernacular schools. There is also a special kindergarten certificate for girls who have passed the middle standard and studied two further years. In the *Central Provinces* graduates are prepared for the licentiate of teaching of the University of Allahabad, and there is also a departmental course of two years for matriculates and intermediates. Students in the *North-West Frontier Province* follow the Punjab junior Anglo-vernacular course. As already stated, *Assam* has no institution for training teachers of English.

VI.—Vernacular Training Institutions.

Institutions.

390. The figures for all training schools have risen from 575 to 801 institutions and from 12,873 to 18,631 students. But as some of the schools train English teachers the figures cannot be taken as accurately measuring the effort in vernacular training.

These schools fall generally into two classes. Normal schools are intended for the preparation of youths who have passed the middle vernacular standard as teachers of vernaculars in secondary schools or as headmasters of primary schools. They impart a superior training extending over a period which varies from one to three years. Training classes or schools of a lower type are intended to turn out a less finished article and instruct possessors of middle vernacular or lower qualifications, generally through a shorter course, as ordinary teachers in primary schools.

(a) Normal schools.

391. With the exception of Madras and Burma, which require separate treatment, the organisation is fairly similar in the various provinces. Bombay, Bengal, the United Provinces, the Punjab, Bihar and Orissa, the Central Provinces and Assam all possess normal schools, called in Bombay training colleges and in western Bengal and Bihar and Orissa first grade training schools. One of these is generally distributed to each revenue division, though in the Central Provinces the number has now risen to seven and the opening of three more is contemplated. The course is usually of one or two years' duration but in western Bengal it is of three years. There is an arrangement peculiar to the Punjab whereby a student, who has undergone a year's study in a normal school and has passed in the first division, may proceed to the Central Training College for further instruction in the senior vernacular class during another year. Such men are employed in the middle

departments of Anglo-vernacular schools as teachers of Urdu, Persian and science. In addition to the two divisional normal schools, Assam has 5 small schools for the training of teachers in the Garo, Khasi, Jaintia, Lushai and Naga hills. The North-West Frontier Province has a normal school for vernacular teachers attached to the training college and a normal school was opened during the quinquennium at Ajmer-Merwara for the teachers of that province and of some of the surrounding Native States.

(b) Training classes.

392. The lower form of vernacular training institutions is not found in the Central Provinces or in the North-West Frontier Province. In Assam it exists only in the shape of two classes attached to the two major normal schools. In Bombay, the United Provinces, and the Punjab there are training classes separate from the normal schools and ordinarily attached to middle vernacular schools. Bengal and Bihar and Orissa have a widespread system of *guru* and *muallim*-training schools.

The system of attaching training classes to middle schools had fallen into disrepute, especially in the Central Provinces and Assam where, having previously been used to a considerable extent, it was abolished. The necessity of training a large number of primary teachers has however led to its continuance or resuscitation in the three provinces mentioned in the preceding paragraph; and in the United Provinces it has proved so successful that the number of such classes has been increased during the period from 109 to 267 and permission has been given to raise the number of pupil-teachers in each class from 6 to 8. It is however significant that the training classes together with the primary classes have been separated from the middle school and placed under the separate control of a special instructor. In the Punjab the existence of such classes is regarded as justified only by the insufficient out-put of normal schools.

The training schools in Bengal and Bihar and Orissa for *gurus* (teachers in ordinary primary schools) or *muallims* (teachers of specially Muhammadan schools) are very numerous and a description of their deplorable condition was given in the last quinquennial review. The original idea was to establish a cheap form of training under which each school should instruct 10 primary teachers of the neighbourhood and then move on to some other locality. As the head teacher received only ₹18 and arrangements for supervision were difficult the results proved unsatisfactory. Nor was it found possible to carry into practice the peripatetic nature of these schools; and the practice arose of locating one at some central place in each sub-division. During the quinquennium ending 1912 two separate schemes of reform were started in western and eastern Bengal. In the former province it was decided to multiply the number of schools so that each sub-division should possess two, while the limit of numbers in each school was raised to 16. In eastern Bengal on the other hand a system of concentration was pursued by the enlargement of the existing schools in the first instance to 20 pupils each. But a further scheme was formulated and sanctioned in 1909 to raise the number in each school to 40 and to provide an improved staff with headmasters in the subordinate educational service. Mr. Hornell states that the system instituted in western Bengal must be condemned alike in its working and its results. It has been decided that the system for the entire presidency of Bengal must follow in its main features that of the eastern districts. A proposal has accordingly been made to erect a substantial building in each sub-division and to employ a headmaster in the subordinate service, the average pay of which is about ₹96, and two teachers in the vernacular teachers' service, for which an average pay of ₹40 is proposed.

Madras system.

393. As regards Madras and Burma, it has already been explained that the demarcation between English and vernacular in Madras is not clear. In order that the organisation of a training school in that presidency may be understood, it should be explained that the six top classes in an ordinary high school are called forms, the lowest being numbered I and the highest VI. A training school consists of three departments or any one or two of them. These are the secondary, higher elementary and lower elementary departments. Pupils admitted to the first must have passed at least the matriculation or hold a secondary school leaving certificate. They undergo a purely technical

course in English for one year and become teachers in secondary schools. The higher elementary department contains pupils who are deemed fit for promotion from the third form or the eighth standard, and the lower contains pupils who may have only completed the fifth year in an elementary school. In both cases the course is of two years, is given in vernacular and contains a large number of general subjects. English may be taught as an additional language in higher elementary departments. Teachers trained in these schools find employment mostly in elementary schools, although some are found in the lower classes of secondary schools. Most district boards maintain sessional schools where teachers are brought up to the standard of general education which qualifies for admission to elementary training schools.

394. The vernacular course in Burma, like the Anglo-vernacular, is divided into three grades, high, middle and primary. All are open to pupils of middle vernacular schools who have completed the work of the sixth standard (the highest but one). The course is of two years' duration for a primary school certificate, and of three for a middle, unless the candidate has already passed the seventh, or highest middle vernacular class, in which case he can take his certificate after two years. A student who has taken the middle school certificate may proceed through two more years' study to the vernacular high school certificate. Thus the theory is that the student has one year's extension of general knowledge and one, two or four years of special training, unless he has already passed the middle standard, when the year of general reading is not required. A lower form of preparation is afforded by the elementary training classes, which admit teachers who have passed only the primary standard and give them one year's training. These are considered to be very successful. Selected teachers and managers are also encouraged by bonuses to hold local classes for untrained teachers in their neighbourhood and to prepare them for the theoretical tests. *Burma system.*

395. There has been improvement in the pay of the staffs. Thus, in Madras, the headmasters and assistants in these schools have been placed in the cadres of sub-assistant inspectors and supervisors from ₹75 to ₹200 and from ₹30 to ₹50. The result has been that the number of graduate teachers in these institutions has risen from 22 to 62. The principal of a vernacular training college in Bombay draws ₹400—500. The Director complains that the posts are regarded as prizes for the most senior, not necessarily the most suitable, men and that the time of the vice-principals is almost wholly occupied in text-book reviewing, etc. The ordinary staff are drawn from the high school staff and are not necessarily picked men. In district normal schools, the teacher generally draws about ₹40. Allusion has already been made to the pay of the teachers in *guru*-training schools in Bengal and the proposals for its improvement. The heads of first grade training schools in that presidency are in the provincial educational service. In Bihar and Orissa, the first-grade training schools were previously ill-staffed. The staff has now been reconstituted with a headmaster in the provincial service (average pay about ₹314), an assistant in the subordinate service (average pay about ₹87), a *pandit*, a *maulvi* and a drill master. The headmasters of *guru*-training schools previously drew ₹18 a month. They have now been placed in a special service on ₹18 rising to ₹30. *Staff.*

396. The qualifications required for admission to schools and classes have been generally indicated. The duration of the courses varies in the normal schools from three years in western Bengal and Assam to two in the Central Provinces (with a third and fourth for selected candidates) and one in the Punjab (which however may be prolonged to two by further study for the senior vernacular certificate). In the training classes and lower training institutions it varies from six months to one or two years. Thus, in Bengal, the *guru*-training course is of two years unless the teacher pupil has already passed the middle vernacular, in which case it is one year. The courses themselves ordinarily consist of some extension of the candidate's knowledge, especially where he has not passed the full middle vernacular course, the reading of a simple work on the principles and practice of education, a considerable amount of drill in method, actual teaching in a model school under supervision and special lessons in drawing, black-board writing, map and *Courses.*

globe-making, etc. Nature study or rural science is frequently included as a subject. In Madras there is a special three months' course for this. A class opened at the Dacca training college for giving teachers instruction in nature study failed owing to the poor qualifications of the students. In the Central Provinces teachers trained on the agricultural farm or in agricultural colleges are attached to normal schools to undertake this work. Of the difficulties to be surmounted, the Madras report speaks as follows.

"As regards the methods followed in the training schools, criticism and model lessons are generally suitably conducted. A weaker point in the training is the work in the practising section. With the existing numbers it is difficult to give the students sufficient practical work; nor does it appear to be sufficiently recognised that the practical work done must be thoroughly supervised, scrutinised and discussed with the students. The teaching of the subjects of general education is variously reported upon. With their better staffs, the government are better than the aided schools. Nature study seems to be the weakest subject and garden work poor. It is hoped that the revised syllabuses which will shortly issue and the special lectures on rural science will improve matters. Criticisms are also heard of the teaching of geography and the vernaculars. On the whole, however, real progress appears to have been made."

VII.—Special forms of Training, etc.

Training of the inspecting staff.

397. Members of the inspecting staff and others, who have not had the benefit of previous training, are sometimes put through short courses. Thus, headmasters and deputy inspectors are deputed to the Training College at Bombay in batches of three for a month. Their visits, says the report, have left the impression that their minds are mostly taken up with problems of administration rather than method. The report further complains that hardly any teachers of Bombay city attend the lectures specially arranged for their convenience. Assistant deputy inspectors in that province are, in their appointment, sent for a month to the vernacular training colleges. Sometimes, as in Assam, inspecting officers are required to pass examinations in various subjects, including method, discipline and organisation. Various arrangements are also made for the training of teachers of oriental classics, though these appear to be but slightly organised, and at Bombay for teachers of commerce.

Itinerant instructors.

398. Where it is found impossible to bring all teachers to training institutions, itinerant instructors are occasionally employed. Two such instructors visit the aided schools of Poona. The experiment has succeeded and is to be extended. Two officers were also deputed to Aden, one of their duties being to instruct the teachers in method, since it would have been difficult to bring them to India for regular training.

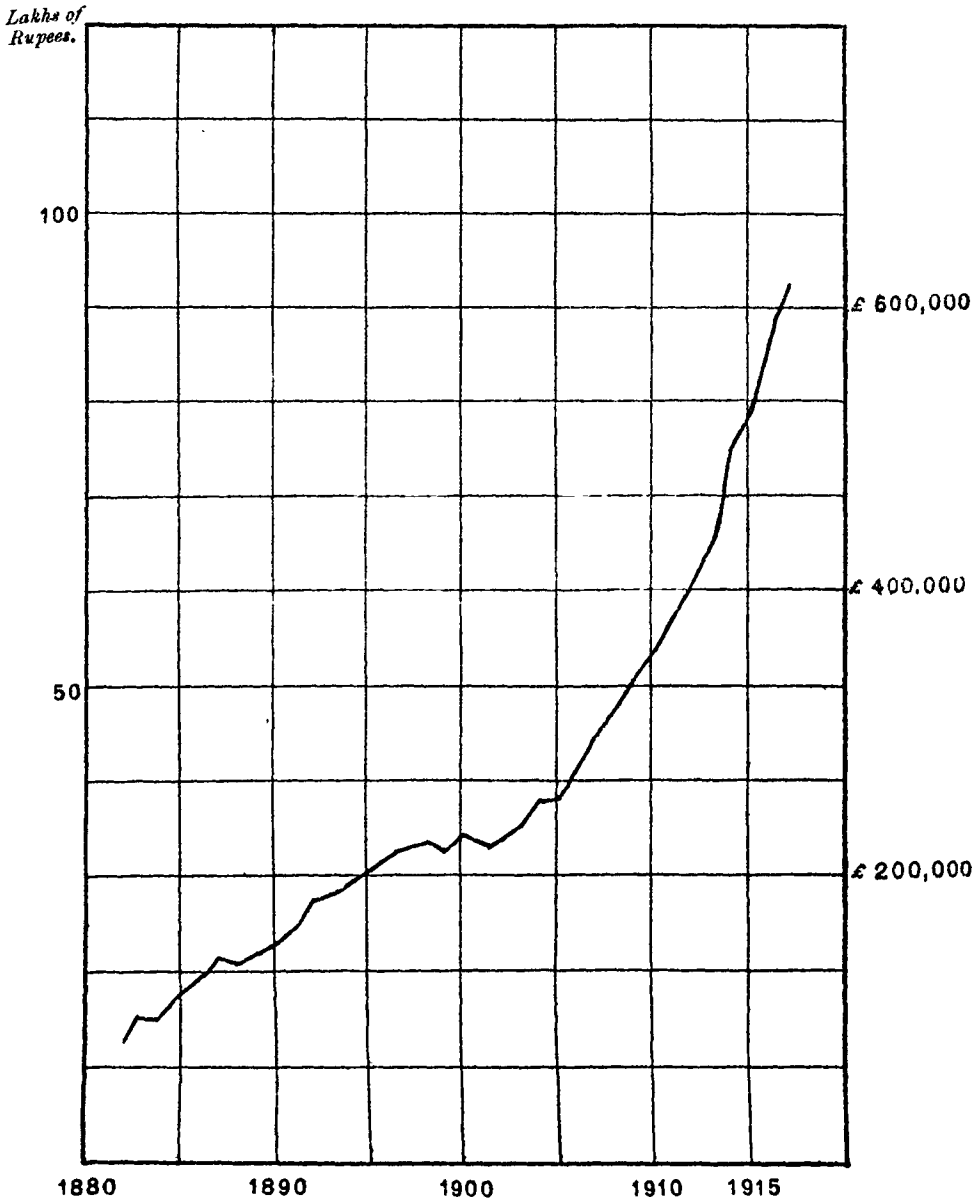
Re-training.

399. Sometimes arrangements are made with a view to keeping teachers in touch with training institutions or with each other. In the Central Provinces there is a system of re-training, under which teachers who have undergone the regular course and have held posts for some years are brought to a normal school for a further year in order that they may revive their acquaintance with methodical work or fit themselves for higher posts, such as headmasterships of middle vernacular schools. Generally however this work is left to the inspecting staff, to organised conferences of teachers, to the influence of school journals and pamphlets and to teachers' associations. These associations are multiplying under departmental encouragement and are reported to be doing good work. The Madras presidency possesses 100 associations with an enrolment of 3,000.

VIII.—General results.

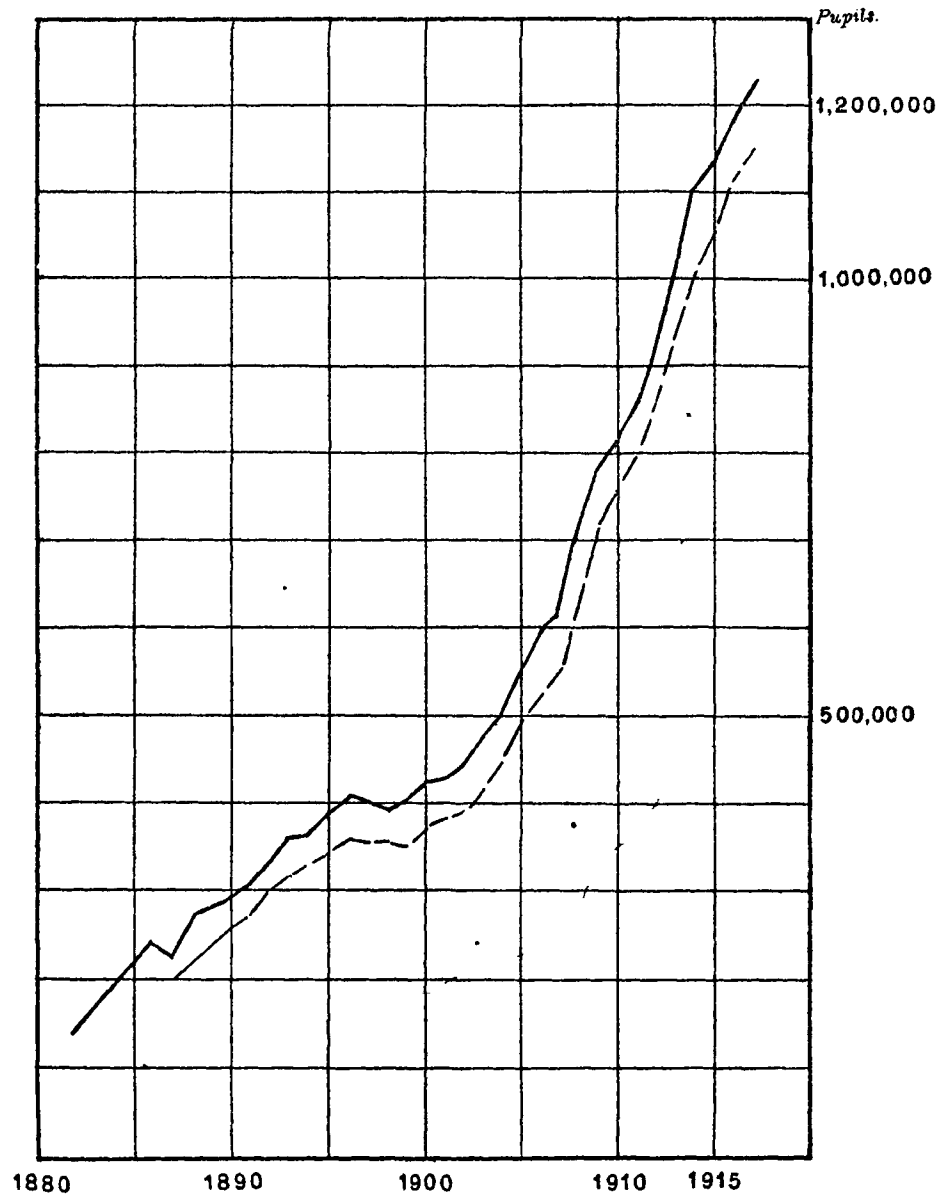
Progress and improvement in qualification of candidates.

400. Although the position as regards the number of trained teachers is still unsatisfactory in some provinces, a considerable advance has been made during the quinquennium and the further imperial grant of 30 lakhs a year announced at the close of the quinquennium will permit of greater progress. The facilities offered in Madras and the Punjab are particularly good, although the rapid increase in the number of schools in Madras will demand further efforts.



Direct Expenditure on Girls' Schools.

Fig. 6.



Girls in all Institutions ——
,, public ,, – – – –
Girls in Boys' Schools

Fig. 7.

No.2317-2 5,500

A very satisfactory feature of the period has been the improvement in the general qualifications of the candidates admitted to the institutions whether for English or for vernacular training. Several reports, notably those from the Punjab and Assam, bear witness to this. The institutions have grown more popular and the choice for admission is wider. Hence more attention can be paid to specialisation in the colleges, and to purely professional studies in the training schools. For the former attract a larger percentage of graduates and even masters of arts, while the latter can generally now count upon securing students who have passed the middle vernacular standard. Indeed, it is hoped in Bengal that it will soon be possible to insist on a like qualification even in the lower type of training institutions and in the United Provinces it is already required. The superiority in the quality of the teaching in those provinces where training was early developed and has been consistently pursued is patent to any one who has visited schools in different parts of India. Where the tradition of good teaching prevails, reasonable pay is offered and endeavours made (by provision for old age, etc.) to create a permanent service, keen and contented teachers and good schools are to be found. On the other hand Mr. Hornell speaks of senior but untrained teachers in Bengal who produce a hostile atmosphere, encourage a tendency on the part of the trained to drop back into customary practices and are unwilling to give scope to newfangled notions.

CHAPTER XIV.

THE EDUCATION OF GIRLS.

I.—General.

401. Girls are educated mainly in special schools reserved for that sex. These do not differ materially in their organisation from boys' schools. They include primary and secondary schools and colleges. Their management too is much the same, save where, as in the Central Provinces, government has assumed the control of the majority of them. Many girls again study in boys' schools, though social custom, such as *purda* or early marriage, ordinarily demands that they do not continue in such schools beyond the age of twelve years. In Burma, where these customs do not exist, schools are largely mixed. There are also certain localities and communities in India proper in which the tradition of *purda* is unknown and the education of girls, though generally carried out in separate institutions, is rendered an easier task than elsewhere. *Organisation.*

402. Attempts are made to form committees in connection with girls' schools. It is not easy to obtain the services of ladies on such committees. The chief inspectress in the Punjab says, "There was a general consensus of opinion that Indian ladies should be the leaders in movements for the expansion of girls' education, but unfortunately in schools maintained by private bodies this aim is not realised and it is noticeable that ladies at present take no part in the management. There is usually a committee of men who lay down the lines on which the school is to be worked, who make financial arrangements and who depute one or two of the members to act as manager and secretary and to supervise the teaching." Sometimes local committees are established supplementary to the school committees. Here there is not the same difficulty, and Mr. Mayhew reports that they are particularly helpful in places where wives of influential officials and non-officials take the lead; he observes that some of them have shown special interest in the development of school libraries. *Committees.*

Inspection.

403. So far as possible, the supervision of girls' schools is placed under a separate inspecting agency, staffed by women. The numbers in this inspecting staff are as follows:—

	Inspectress.	Assistant or sub-assistant inspectress.
Madras	3	11
Bombay	3	...
Bengal	2	10
United Provinces	11	3
Punjab	5	2
Burma	...	1
Bihar and Orissa	2	5
Central Provinces	2	4
Assam	1	1
North-West Frontier Province	1	...
Delhi	1	...
TOTAL	31	37

In 1912 there were 20 inspectresses and 23 assistant or sub-assistant inspectresses. Additions during the quinquennium include the creation of 11 inspectresses' posts—being an addition of one in Bombay, three in the United Provinces, three in the Punjab, and one each in Bihar and Orissa, the Central Provinces, the North-West Frontier Province and Delhi. The increase among assistant inspectresses is largely due to an addition of five new posts in Bengal.

404. Ordinarily an inspectress is specially concerned with secondary and training schools, an assistant inspectress with primary schools. But in some provinces there are no assistant inspectresses, the work falling entirely on the inspectresses. The number of these is largest in the United Provinces and the Punjab. In the United Provinces there are a chief inspectress, an assistant chief inspectress largely concerned with training and seven circle inspectresses. In the Punjab there are normally an inspectress for each division and two inspectresses attached now to one now to another division; but the number is at present reduced by two. The inspectress of the Lahore division is called the chief inspectress and exercises control over the others. Some of the boards and municipalities employ district inspectresses and superintendents of town schools; difficulty is experienced in finding ladies for these posts. In Burma two posts (one of an inspectress, the other of an assistant inspectress) have long been sanctioned but never filled. The superintendent of one of the schools in Rangoon acts as part-time inspectress. There are 68 inspecting officers in India for 19,365 institutions, an average of 285 institutions per each officer. Not only is the number of institutions larger than the staff can manage, but the area to be traversed adds to the difficulties of administration. In Bihar and Orissa, each inspectress has to tour over 40,000 square miles. The difficulties inherent in travelling through India off the beaten track are greatly increased in the case of women. The reports generally speak of the arduous duties of the staff and the conscientious way in which they are discharged by its members, whether European or Indian. In view of the paucity of officers it is not always possible to entrust the inspectresses with all institutions or with full control. In Bombay they are not administrative officers at all, but merely inspect. In Assam an inspectress administers the schools at headquarters of districts and sub-divisions; girls' schools not so situated are under the control of the inspectors, although the inspectress is free to visit them. In the Central Provinces the inspection of remote schools is left to the deputy inspectors. Elsewhere the inspectresses generally exercise full powers, subject of course to the Director. In Bengal the transfer of full responsibility to the inspectresses took place during the quinquennium and is regarded as of

great importance. Even there, however, the subordinate staff of the inspectors has to assist in the case of outlying institutions.

II.—Figures of institutions and pupils.

405. The total number of institutions for girls is now 21,320 and of girls under instruction 1,230,419, of whom 720,723 are in girls' schools and 509,696 in boys' schools. The figures for public institutions are 19,365 schools and 1,156,468 pupils. *Institutions for girls.*

Figures for girls' schools according to provinces and standard and of girls according to provinces and periods are shown in supplemental tables 142 to 157.

The following statement gives the figures of increase in different provinces :—

	1911-12		1916-17		Percentage of increase or decrease in numbers at school.
	No. of girls under instruction.*	Percentage of girls under instruction to female population.	No. of girls under instruction.*	Percentage of girls under instruction to female population.	
Madras	226,685	1·1	325,889	1·5	+43·8
Bombay	153,090	1·2	144,621	1·5	— 5·5
Bengal	236,140	1·1	300,895	1·3	+27·2
United Provinces	54,329	·24	70,712	·32	+30·4
Punjab	53,909	·59	69,702	·79	+29·3
Burma	79,416	1·3	195,488	2·1	+58·0
Bihar and Orissa.	93,326	·49	111,388	·63	+19·4
Central Provinces and Berar	30,847	·39	37,352	·54	+21·9
Assam	18,426	·54	28,624	·88	+55·3
North-West Frontier Province	4,820	·47	4,425	·44	— 8·1
Minor Administrations	1,935		11,323	1·6	
INDIA	952,923	·76	1,230,419	1·03	+29·1

The increase in schools has been 5,247, so that each additional institution may be regarded as having brought in 53 pupils on the average. The average enrolment of a school was 35·8 in 1911-12 and is now 35·7. The number of public institutions has increased by 5,252 and that of private institutions has decreased by 5; their pupils have increased and decreased by 280,804 and 3,308 respectively. The total decline in the North-West Frontier Province is accounted for entirely in private schools and, in the Director's opinion, connotes no serious educational loss. That in Bombay is only apparent, as figures for Native States which in that presidency accounted for some 44,000 girls under instruction have now been omitted. For the same reason the increase in Bihar and Orissa is really by 25·4 per cent. The largest increases are in Burma, Assam and Madras and indicate a solid advance in female education. If the figures for the Native States now omitted were taken into consideration the 29 per cent. increase for whole of India would be considerably greater.

406. Attendance at girls' schools is always a difficulty. It is 47·7 per cent. of the enrolment, against 85·2 per cent. in the case of boys. In 1911-12, it was 43·4 per cent. This poverty of attendance, combined with the large proportion of very small girls in the infant classes is a paramount and highly unsatisfactory feature. It means that the enrolment figures are largely misleading. *Attendance.*

* In public and private institutions.

Pupils of different communities.

407. The proportion of girls of different communities at school or college is as follows :—

—	Total number under instruction.	Percentage to female population of community.	Percentage of increase in the last five years.
Europeans and Anglo-Indians	20,497	22·5	+28·1
Indian Christians	87,334	8·0	+19·7
Hindus :—			
Brahmans	145,024	2·6	+20·04
Non-Brahmans	558,730	·75	+26·6
Muhammadans	284,661	1·03	+33·5
Buddhists	106,544	1·9	+61·1
Parsis	6,220	14·8	— 4·7
Others	21,409	·44	+29·2
TOTAL	1,230,419	1·03	+29·2

It is not surprising to find the highest figures among Europeans, Parsis and Indian Christians. The contrast becomes much more strongly marked if the higher stages of education are considered. It may seem curious that Muhammadans (among whom the idea of *purda* is strict) should send a larger proportion of girls to school than non-Brahman Hindus. But Muhammadan girls go fairly freely to primary schools and over 40,000 are reading in Koran schools.

III.—Expenditure.

Expenditure on girls' institutions.

408. It is impossible to make any accurate estimate of the full amount spent on the education of girls, because a considerable number are enrolled in boys' schools and the cost of scholarships, inspection, etc., cannot be separated. The expenditure on institutions specially designed for girls has risen from ₹60,75,045 to ₹92,86,810 or by 52·9 per cent. Notwithstanding this considerable increase, the amount so spent constitutes only 11·7 per cent. of the total direct expenditure on institutions.* The detailed figures are given in supplemental tables 158 to 161.

Imperial grants.

409. Imperial recurring grants aggregating 11·4 lakhs (of which 10 lakhs were distributed to the major provinces) were made during the quinquennium for girls' education, which also participated, along with technical and special schools, in a non-recurring grant of 25 lakhs.

Fees.

410. The figures for fees are given in supplemental tables 163 to 165. In colleges and secondary schools the average annual fee is ₹60·4 and ₹12·9 as against ₹70·1 and ₹14·2 in the case of boys. In primary schools the fee is nominal—only 5 annas and $3\frac{1}{3}$ pies a year. In Bihar and Orissa the annual fee in a primary school is equivalent to a penny three farthings.

Average cost of a pupil.

411. The average annual cost of education of a boy and of a girl is compared below.

	Boy. ₹	Girl. ₹
In an arts college	153·6	279·7
In a training college	698·2	488·3
In a high school	35·3	95·1
In a middle English school	21·5	52·9
In a middle vernacular school	9·9	15·7
In a primary school	5·0	6·9
In a training school	143·0	239·5

* The figures for provinces are—Madras 13 per cent., Bombay 14·7, Bengal 9·4, United Provinces 10·6, Punjab 13·1, Burma 14·6, Bihar and Orissa 8·1, Central Provinces and Berar 8·8, Assam 7·3, North-West Frontier Province 6·2, Coorg 16·2, Delhi 21·1, Ajmer-Merwara 12·4, Baluchistan 11·6, Bangalore 37·3.

The reasons for the higher average cost in the case of girls' institutions are the comparatively small enrolment and the special staff which is occasionally required. Training colleges are an exception. Those for girls are mission institutions, the staffs consist largely of honorary workers and the rate of stipends is lower.

IV.—General developments.

Difficulties.

412. The main difficulties of girls' education are too well known to need enumeration. The problem is still social rather than educational. Among the obstacles which may be described as partially educational are the difficulty of inducing girls to attend school regularly and remain there for a reasonable length of time, the paucity of competent women teachers coupled with the prejudice against employing men and the differences of opinion regarding the nature of the curriculum. Mr. Mayhew speaks of the disappointing progress made in vernacular education. He assigns it to the absence of any genuine demand among the general public. "This," he says, "is responsible for our schools being for the most part unsatisfactory crêches, crowded infant classes and first classes and a handful of girls in the higher classes taught by inefficient teachers. The supply of teachers can be improved only when an increased demand for genuine education fills our higher classes and enlarges our field of selection. Until the supply is thus improved, increase of expenditure on new schools will result mainly in the further swelling of our lower classes without any material gain to the women of the province." One of the inspectresses in Bombay speaks of the apathy of the parents and, in many cases, the active hostility of the mother who resents every hour spent at school as time lost from domestic duties. From all quarters come complaints regarding the need of women teachers. The percentage of girls reading in the lower primary stage to the total in the primary stage is 95·3, which is rather larger than the percentage in the case of boys (88·9). But the overshadowing fact is that 38·8 per cent. are reckoned among those who are rather erroneously described as pupils not reading printed books. The corresponding percentage for boys is 28·8. The Madras report states that approximately 58 per cent. of the pupils in both secondary and primary schools are actually in the infant classes. A further difficulty experienced in some localities is that of inducing girls of different creed or caste to come to school together. This, however, is not universal. The Bengal report states that caste schools are not necessary and that girls of low caste are found sharing the benches with Brahmans.

Attitude of the public.

413. On the other hand the increase in numbers, though small in itself, shows continuous progress. Some authorities perceive a change in the attitude of the public. The chief inspectress in the Punjab says, "Indian public opinion has slowly changed from its former attitude of positive dislike to the education of women and is now much more favourable as regards every community. The Arya Samaj, Sanatan Dharma and Khalsa societies are making great efforts to bring education within the reach of the masses and the Anjuman-i-Islamia is also gradually establishing its own schools, though it is only recently that this necessity has been at all realised. Professional men now wish to marry their sons to educated girls who can be in a real sense companions and helpmates; therefore education is beginning to be valued by parents as improving the marriage prospects of their daughters." This last remark naturally applies in the main to secondary schools. Mr. Mayhew, whose gloomy account of primary education has already been quoted, says that the outlook in secondary education is far more encouraging; the work done is good and there are signs of a rapidly growing desire for English education among the more advanced sections of the community. He repeats an opinion expressed that, when men begin to demand educated women for their wives, female education will make a start.

414. But, save in isolated instances (notably some of the remarkable institutions of the Bombay presidency) self-help and an active policy are slow to manifest themselves. Mr. Hornell points out that the primary education of girls as well as of boys is a matter for which boards and municipalities are responsible, but that practically all the effective girls' schools which have been started up to the present have been the result either of the direct action of the

education department or of the efforts of some private body, such as a missionary society. " It is idle," he says, " to expect such a body as a district board or a municipality to be in advance of public opinion. Moreover there always has been and still is the lack of funds. Having more than they can do to meet demands which exist, they cannot fairly be criticised for failing to create demands." Nor are private bodies always active in remedying the defect. Much is left to the missions. Of the ten non-government high schools for Indian girls in Bengal, seven are mission institutions. The Madras report says that the progress anticipated from indigenous effort has not been very encouraging, though there is a growing demand for education through board and municipal agency and for greater local control. Mr. Mayhew says that in spite of every encouragement to venture schools, with the eventual prospect of their being made government schools, their number does not rise. There is a general unwillingness to pay fees, save in some of the higher institutions. One of the inspectresses in Bengal says that parents refuse not only to pay fees but even to supply their girls with books and the other things necessary for education, and that these are actually purchased by the teachers of primary schools out of their meagre pay. Mr. Jennings sees little evidence of readiness in the parents to pay fees and remarks that, while government and local bodies are doing more than formerly to encourage girls' education, there is an actual decline in private subscriptions. Many girls require conveyances in order to come to school; Mr. Hornell and Mr. Jennings consider this one of the greatest difficulties to be encountered and the latter says that this item sometimes accounts for half the cost of a school.

Recognition of the needs of girls' education.

415. On the 12th October 1915, a deputation headed by Mrs. Fawcett waited on the Secretary of State for India, pointed out the backwardness of female education in India and proposed a committee of enquiry. The Government of India addressed local Governments and asked for opinions and views. Much information has been collected and some valuable recommendations have been made. But the results of the enquiry were incomplete at the close of the quinquennium.

The central and the local Governments, however, had previously recognised the pressing nature of the problem, the peculiar difficulties with which it was beset and the desirability of enlisting the advice and co-operation of ladies, both European and Indian, in finding a solution. In the United Provinces, for instance, a committee had been summoned in 1905. A standing committee, with half its numbers composed of ladies, had been established in Eastern Bengal and Assam in 1908. In 1913 this was superseded by a similar committee for the newly constituted presidency of Bengal. A special committee was summoned in the same presidency in 1914 to consider the existing facilities for Hindu girls and their improvement. Other committees, of a temporary nature, have discussed the subject.

Collegiate education.

416. There are 16 colleges for women, containing 730 students. In addition to these, there are 292 women studying in colleges for men. Of this total, however, only 742 are actually studying in collegiate stages.

In 1912 the number of arts colleges was six, with 124 students. With the addition of those in men's colleges the total number of students was 369. Now there are 12 arts colleges with 651 students; and 191 are reading in men's colleges—a total of 842 women students, of whom 562 are in collegiate stages.

The principal event of the quinquennium was the establishment of two colleges in *Madras* city—the Queen Mary's College under government management, and the Women's Christian College under mission management. Despite forebodings as to their success, they are well attended, each having some 70 women on the rolls. The new building for the government institution is already inadequate. They are excellently staffed, have obtained affiliation to the B.A. in certain groups and are largely residential both for the students and for the lady members of the staffs. Bright surroundings and sympathetic supervision have made the institutions attractive. The total number of arts students in the presidency has risen from 46 to 184, inclusive of a small number at the Sarah Tucker College, Palamcottah. (The United Free Church College at Royapuram has been absorbed in the Women's Christian College.) *Bombay* has still no college for women, but 125 girls attend men's colleges. A scheme for a women's college has been under consideration. *Bengal* has three colleges, all in Calcutta—the Bethune and the Diocesan

Colleges and the collegiate department of the Loreto House school. These contain 144 students. No women read in men's colleges. The Bethune college is a government institution. Mr. Hornell states that it has been neglected and mismanaged. Though improvements have now been effected, comments are made on the facts that the majority of the staff are still men, that the measure of affiliation is narrow, that accommodation is inadequate and that the hostel is unsuitable. There are four colleges in the *United Provinces*, of which one, the Isabella Thoburn College, is for Indians, while the other three, Woodstock College, Mussouri, the Allahabad European Girls' High School and All Saints' Diocesan College, Naini Tal, are for Europeans. The only recognised collegiate classes in the *Punjab* are those attached to the Kinnaird High School—though Queen Mary's College (see paragraph 448) prepares students privately for the intermediate. At *Bangalore* there is the college of the Sacred Heart for Europeans. No other province possesses a women's college, though intermediate classes have been opened at the Ravenshaw Girls' School, *Cuttack*.

The four professional colleges comprise one medical and three for training. They are noticed in paragraphs 421 and 435.

417. The successful women candidates at the university examinations in 1916-17 were as follows:— *University examination results.*

Master of Arts	6
Bachelor of Arts (honours)	13
Bachelor of Arts (pass)	42
Bachelor of Science	1
Intermediate Arts	79
Intermediate Science	3
TOTAL	144

Earlier statistics do not admit of a comparison.

418. The number of secondary schools (exclusive of middle vernacular schools) has risen from 328 with 34,418 pupils to 393 with 48,435 pupils. Schools for Indian girls have increased from 178 with 20,058 pupils to 231 with 29,942 pupils. The number of Indian girls in the secondary stage of instruction is now 17,652. *Secondary education.*

The quality of teaching is probably better than in boys' schools. Mr. Hornell, speaking of Bengal, says that the superiority of girls' over boys' high schools has never been seriously contested. This is partly due to the fact that secondary schools for girls are largely under mission management. In Madras the great majority are thus managed; and the inspectresses in that presidency express themselves as generally satisfied with the methods of teaching.

Middle vernacular schools have increased from 168 to 296, and the number of pupils from 15,734 to 30,719.

The number of successful candidates at matriculation, school final examinations or tests of similar standard increased from 320 in 1911-12 to 615 in 1916-17.

419. Primary schools for Indian girls have increased from 12,486 with 463,549 pupils to 18,077 with 627,908 pupils. *Primary education.*

Government has signified its special interest in girls' primary schools, sometimes, as in the Central Provinces, by assuming responsibility for their maintenance, sometimes by establishing model or special schools. Such are the model schools of western Bengal, which are said to be doing very satisfactory work. The same result is being produced in the eastern districts of Bengal by the urban schools—a superior type of primary school situated at sub-divisional headquarters and other centres. Western Bengal again has 'peasant girls' schools' for backward localities, which are said to be highly appreciated. In eastern Bengal the *panchayati* union school system has been applied to girls' education, but only to a very limited extent. These union schools are managed by the district boards. The idea was to establish schools on a regular topographical system and not in the present rather haphazard way. But the progress hitherto made is too infinitesimal to provide experience of such a survey system.

The work done in primary schools, especially those of the *mofussil* and where women teachers cannot be obtained, is inferior to that of the secondary schools. Miss Bose, an officiating inspectress of schools, writing of board-aided schools in western Bengal, says that schools receive from R1-8-0 to R3 a month from the board or primary funds. "With this grant, a *pandit* is appointed, but not a whole-time one. He is, in most cases, in charge of a boys' school, and devotes two or three hours a-day to teaching girls. Naturally all consideration is made for boys. These schools are held either in the early morning or in the afternoon, when the *pandit* is free from his work in the boys' school. These wretched so-called schools do not produce much good result. Most of them are held in a hut or cow-shed or in a room or verandah of a ruined and dilapidated house, which is very dangerous. There is often no apparatus and no furniture. The children sit on mats and write with chalk on the floor." Miss Irons gives a similar account of affairs in eastern Bengal, where, she says, the majority of the school staff are nominally paid from the district board, with the result that the remoter village schools exist in name only and the children hardly learn anything.

Professional colleges.

420. It has already been stated that there are four professional colleges for women. One of these is for medicine and three are for the training of teachers. No women are studying for law. The training of teachers is treated in paragraphs 435-436. It remains to consider medicine.

Medical Education.

421. The Lady Hardinge Medical College for Women at Delhi is the only medical college in India which is intended exclusively for women. It supplies a much felt need. Previously medical instruction of the collegiate standard was imparted to women only at colleges intended for men, with the result that Indian women of suitable class were deterred from coming forward in numbers adequate to the growing demand for lady practitioners, and it was necessary to obtain recruits from England or send candidates to England for training. The college includes a training school for nurses. It admits students from all parts of India. Along with the Dufferin Association, it forms an important element in the scheme for providing medical aid to the women of India and marks a decided advance consonant with the spirit of the times.

The college was opened in October 1916 and has obtained from the Punjab university affiliation to the degrees of medicine and surgery. In 1917, six months after the opening of the college, five students passed the first science (medical) examination. There are at present 48 students on the rolls.

The staff consists of a principal, six professors and an assistant—all highly qualified ladies.

The buildings, conveniently situated for both the old and the new city on 50 acres of land, comprise lecture theatre, library, museum, lecture rooms and laboratories, separate hostels for different communities, and a hospital with some cottage wards. The whole is walled round and every provision is made for the seclusion of students and patients.

The Government of India support the institution with a liberal subsidy and large donations have been received from the public. There are fourteen scholarships, some being of the value of R30 a month; and two gold medals are awarded, one in memory of the late Lady Hardinge, who initiated and carried through the scheme though she did not live to see its completion, and the other the 'Lady Chelmsford medal.'

In addition to this there are 89 girls studying in medical colleges for men.

There are three medical schools for girls with 202 pupils; and 59 girls are studying in medical schools for men. The schools for girls are the midwifery school, Hyderabad (Sind), with 3 students, the women's section of the Agra medical school with 61 students, and the Women's Christian Medical College, Ludhiana, with 138 students.

Industrial and other vocational schools.

422. Apart from the instruction in needle-work and similar subjects ordinarily given in the common schools, there are a certain number of special institutions for the industrial and vocational training of girls; and to some

extent girls patronise schools of this type which are primarily intended for men.

The school of art, *Madras*, always has some women on its rolls. *Bombay* has six industrial schools for girls, to most of which government contributes a grant. The Church of England Zenana Mission schools at Karachi and Sukkur appear to be doing particularly good work among poor widows and deserted wives. The schools of art contain 24 girl pupils, the commercial schools 54. In *Bengal* there are eleven industrial schools for girls and 515 girls (largely Indian Christians) are undergoing training of this kind. The most prominent institution is the Kalimpong Industrial School, under the Church of Scotland Mission, which has introduced lace-work and embroidery into the Darjeeling district. There are other successful schools under missions—the Church of England Zenana Mission's Industrial Homes at Baranagar and Agarpara, those of the London Missionary Society at Berhampore, and of the Baptist Zenana Mission at Jessore, the American Mission lace class at Midnapore, the Mulvaney Home in Calcutta and the Australian Mission's home for widows in the *bil* tracts of Faridpur. All these schools produce a good quality of work in lace, embroidery, etc. At the first two, carpets, jams, chutney, and curry-powder also are manufactured. The last mentioned, which is said to be doing splendid work among the Namasudras, exports large quantities of embroidery to Australia and thus assists in supporting itself. These schools receive aid from government. Peripatetic teachers of needle-work are employed and their number was raised from two to twelve. A sale of work done under their supervision was organised and the proceeds given to the war relief fund. The *United Provinces* has a school of needle-work at Lucknow. Missions maintain schools in the *Punjab*, notably one recently opened at Clarkabad with 174 girls, who learn *kasida*-work, flour-grinding, *newar*-making, sewing, spinning, etc. In *Burma* there are no special schools, but lace-making and weaving are taken up in a few of the common schools. *Bihar and Orissa* shows five lace schools with 338 pupils. Certain other classes exist, but are not shown in the returns, in the Santal Parganas. A class was also opened in 1916 in connection with the Badshah Nawab Razvi training college; but it is reported that "none of the wives or daughters of the gentlemen who were so anxious to see the class started have joined" and the place languishes because day-scholars are not provided with stipends. There are three mission schools with about 80 pupils in the *Central Provinces*. That at Saugor is said to be very popular and to do excellent work. It attracts pupils from the United Provinces and even from Bengal. Various kinds of needle work, lace making, durri making, weaving, cooking, and housekeeping are taught. The other schools are at Bhandara and Seoni-Malwa.

The general result is 2,617 girls in 70 technical and industrial schools intended for girls. The cost of these special schools is ₹1,63,154, to which government contributes ₹41,219. They are mostly of the aided type and to a large extent maintained by missions—a fact which accounts for the large contribution (over ₹95,000) from subscriptions. This is a sphere of work in which the missions are pre-eminently successful. The following numbers study in schools primarily intended for boys—in schools of art 83, in technical and industrial schools 60, in commercial schools 101.

423. There are certain institutions, generally of a private kind, which deserve special mention. Such are the homes for widows which have sprung up in various parts of India. The work which is being done in the Bombay presidency by Professor Karve's Widows' Home and Mahila Vidyalaya, the Seva Sadan, Pandita Ramabai's Mukti Sadan, the institutions named Vanita Vishram and the Jain Shravikashramas is especially noteworthy. The Bombay report contains an interesting account of the Vanita Vishram at Surat. The Seva Sadan at Poona aims at fostering among women, especially among widows, ideas of social usefulness and national service suited to the present day requirements of the country. The institution comprises a training college, a primary department and special classes for music, nursing, English, etc., and two hostels. *Private institutions.*

A type of school called the *Mahakali pathshala* has been in existence for some time in Bengal. These attempt to teach the greater part of the departmental curriculum with the addition of hymns and prayers in Sanskrit and instruction in the ritual of family ceremonies and in domestic economy. The Bengal Director sees no reason why these subjects should not be combined with a sound general education, but states that the overcrowding of the curriculum and the poor teaching of the *pandits* are obstacles. He mentions five such schools. The original institution in Calcutta is not supported by the public and is crippled with debts. Those in the *mofussil* appear to be popular.

University for women.

424. An interesting development which has taken place during the quinquennium is Professor Karve's scheme for an Indian University for women. The aim of this scheme is to give higher instruction to women through the vernacular and to adapt it to their special needs. The university has its headquarters at Poona, but appears to contemplate the affiliation of institutions elsewhere. It is working entirely on independent lines and seeks no recognition or aid from government.

Home classes.

425. One of the methods by which it has been sought to overcome the *purda* difficulty is the system of home-teaching or *zenana* classes. In *Bombay* this is conducted by private persons or associations such as the Seva Sadan, the Servants of India Society and Mrs. Nikambe. In *Bengal*, government finances the scheme and maintains its own teachers. The number of these teachers was increased and progress is reported as satisfactory, 1,317 women now receiving instruction by this means. The teachers visit certain houses on specified days, where arrangements are made for the gathering together of *purda* ladies of the neighbourhood who have joined the classes. They also make house to house visitations. The organisation is necessarily separate for Hindus and Muhammadans. The difficulty is to find competent teachers, especially in the latter community. *Bihar and Orissa* has a similar system, with 35 teachers and 630 pupils. In the *Central Provinces* this kind of instruction is conducted by missions and educated Indian ladies. The town of Jubbulpore alone has 424 women in the classes. A beginning has been made in *Assam* at the town of Sylhet, where there are now two governesses and 70 pupils.

There is no doubt that this system is a great boon to married women who, but for the advantages it offers, would be unable to obtain any education. But it is costly and its scope is necessarily limited. Fears have sometimes been entertained that it might discourage persons who could come to school from doing so. But it should be possible to provide against this danger. It is to be hoped that, small as is the number of women who can thus be instructed, their influence and example may one day serve as effective propaganda.

Co-education.

426. It has already been stated that 500,696 girls read in boys' schools. The figures and percentages for provinces are given below :—

	Number of girls studying in boys' schools and colleges.	Percentage of girls so studying to total of girls under instruction.	Percentage of increase or decrease in five years.
Madras	184,767	56·7	40·9
Bombay	53,730	37·[illegible]	—4·0
Bengal	70,907	23·6	+8·8
United Provinces	19,000	26·9	49·9
Punjab	4,634	6·7	+1·59
Burma	92,152	73·4	+53·4
Bihar and Orissa	49,657	44·6	—8·8
Central Provinces and Berar	16,350	43·8	39·9
Assam	15,299	53·4	+41·1
North West Frontier Province	672	15·2	—9·7
Minor Administrations	2,528	22·3	
INDIA	509,696	41·4	+24·1

In Burma the distinction between boys' and girls' primary schools is difficult to draw, co-education being regarded as a normal feature. An interesting fact regarding that province is that the prejudice against admitting girls to monastic schools has either weakened or was exaggerated in the past. In one district alone, 122 monastic schools are found to admit girls, and one or two *hpongyis* have even opened training schools for girls. The next highest figure is in Madras, where the *purda* system does not largely prevail.

427. In India co-education generally means the education of small boys and girls together in village schools where there happens to be no regular girls' school. The following account, taken from the Bombay report, is typical and contains a useful suggestion. "The need of admitting girls to boys' schools usually arises where a separate girls' school is not available. But people in this country, especially in rural parts, do not relish the idea of girls above the age of 10 or so studying in the same school with boys. Whenever, therefore, there is an attendance of about 15 girls on an average in a boys' school, separate provision for girls seems desirable. A full-fledged school need not be immediately established. A class with one teacher will serve the purpose equally well, until the numbers increase and larger provision becomes necessary. As regards infants, however, under the age of seven, it seems to be desirable to place them all, whether boys or girls, together under the same roof and entrust them to the care of a trained school mistress (wherever such teachers are available). Such an arrangement, besides offering to some little boys the attraction of going to school with their elder sisters and *vice versâ*, and making more even distribution of the school going population of a locality between the boys' and the girls' schools there situated, would afford scope for free play to a spirit of healthy emulation between boys and girls. The Education Commission of 1882 suggested the opening of schools for children of both sexes under seven." Mr. Hornell discusses the question whether encouragement should be given to co-education. "The problem," he writes, "is how to provide instruction for girls in a village which cannot support more than one *pandit*. In a case like this two different arrangements seem to be in vogue. In some places the girls come to school with the boys; in other places the *pandit* holds, or is supposed to hold, separate classes for the girls, either in the morning before the ordinary school hours or in the afternoon after the boys' classes have been dismissed. In either case the *pandit* receives some small extra remuneration on account of the girls. I must confess that of the two arrangements just cited the former seems to me to be the more practicable. A village *pandit* is rarely, if ever, a man whose sole means of livelihood is teaching. He cannot earn enough to support himself and his family. This being so I cannot imagine that the girls if they have to be taught outside school hours receive very much serious attention. I realise, however, that if the parents object to their girls being taught with the boys, the special class arrangement outside school hours is the only possible one. The whole question calls for careful consideration in the light of the actual facts." One of the Bengal inspectresses favours a capitation grant (such as used to be given in eastern Bengal). Another thinks that any system which offers a *pandit* extra remuneration for teaching girls is rather a hindrance than otherwise to girls' education, since the girls are invariably neglected. The Director holds (what is doubtless beyond dispute) that where a separate girls' school exists, no encouragement should be given to the *pandit* of the boys' school to admit girls. He also doubts whether even where there is only one village *pandit*, it is wise to offer him additional remuneration—a view which would probably be disputed by those who consider every means to be worth trying which will increase the number of girls under instruction. In the United Provinces, it has been laid down that, while girls may attend boys' schools where there is no girls' school, no encouragement should be given to the practice by capitation grants or other means.

428. The question of the proper course to be pursued in girls' schools has exercised educationists. There are two schools—those who would make the course substantially the same as in the case of boys and those who would modify it to prepare girls for their domestic duties in life. *Courses.*

Considerable dissatisfaction exists regarding the courses as at present instituted, both secondary and primary. Regarding the former, Mr. Hornell

says that the influence of the matriculation, though always an evil, is particularly unfortunate in the case of girls' schools. "The university regulations take no account whatever of the special educational needs of women. The only concession allowed to girls who appear at the matriculation examination is that they can substitute a vernacular for a classical language. But the difficulty does not end there. The great majority of girls who go to school at all leave at about 12 to 14. Of those few who stay long enough to go through a complete secondary school course many drop out at the school leaving stage. Surely it is a monstrous anomaly that those Indian girls who can go through a complete secondary curriculum but whose education must cease at the latest at the end of it, should be compelled to devote the whole of their energies to preparing for an examination which ignores all their peculiar needs—an examination the sole gain of passing which is that it admits them to further courses of studies which they have no prospect whatever of attempting."

Mr. Hornell dwells on the peculiar unsuitability of such a course in the case of pupils of mission schools, who are often poor and will have to support themselves when their education is finished. Miss Brooke, the inspectress in Sind, writes that the more thoughtful among the educated class of parents have begun to claim for their daughters an education such as will fit them for their inevitable lot in life, *i.e.*, that of wives and mothers. She urges the extreme importance of educating women "but not to be poll-parrots or calculating machines or to be able to say that they have passed a certain examination but to be of service to the race."

On the other hand those are not wanting who point out that any course, whether vocational or general, is of educative value if properly handled, that no great differentiation is essential and that the Indian home generally affords an excellent school of domestic economy.

429. The resolution of 1913 recommended that the education of girls should be made practical with reference to the position they would fill in social life, should not seek to imitate that which is suitable for boys, should not be dominated by examinations and should pay special attention to hygiene and the surroundings of school life. Attempts have been made during the period to carry these recommendations into effect.

In *Madras* the secondary school leaving scheme provides a wide choice of subjects and reduces the strain of examinations to a minimum. Music, needlework, domestic economy and physiology are included among the optionals and are taken in a number of schools. New secondary courses were framed in *Bombay* which include home craft as a compulsory subject. But the cost and the lack of teachers qualified to instruct in this subject formed a stumbling block, and the opening of a centre in which it could be taught was stopped by the out-break of the war. Pending the introduction of these courses, discretion is allowed to inspecting officers regarding the work to be demanded of girls and science or domestic economy may be offered as alternatives to geometry and algebra. The primary course already includes the rudiments of domestic economy, hygiene, singing, needle work and, in the highest standard, household book keeping. It is realised that the course is too heavy for rural schools and its simplification is being considered. In *Bengal* an attempt has been made to concentrate teaching for the matriculation in a few schools and to induce the authorities of others to arrange a curriculum in accordance with the needs of pupils, hygiene, nursing, needlework, cookery and domestic work being included. The attempt, as shown below, has not been successful. The special primary course in eastern Bengal largely dispensed with text-books and made story telling and correlated lessons (in accordance with a teachers' manual) a special feature. This too has been unsuccessful, owing partly to the inability of the teachers to undertake such instruction and partly to the desire of parents to see a text-book in the hands even of girls of the infant class. A Committee met in the *United Provinces* in 1915 to consider the question. They recommended the simplification of the arithmetic course and the introduction of domestic science as a compulsory subject in the lower middle classes. These changes have been adopted and a series of more suitable readers will shortly be prepared. The improvement of the staff in the *Punjab* has produced better teaching of needlework and domestic economy. The latter subject is said to be well taught in boarding schools, where practical instruction can be given in cooking, cleaning and house-keeping. In day schools there are difficulties, but arrangements are often made for cooking classes once a week. In the Victoria Government School the cooking of daily food, of preserves and invalid dishes is regularly taught and laundry work has begun, the girls washing and getting up their own clothes. Some of the mission boarding schools are conducted on the cottage system. "The girls are divided

into families of twelve. The elder girls take out stores for a week and manage on them, cook, mend, wash and look after the younger children, who, in their turn, help with the lighter work, cleaning, and tidying, fetching water, and kneading the *atta*. It is found that, though rather more expensive owing to the extra firing, etc., these arrangements are more satisfactory; the elder girls become experienced house mothers and develop a sense of responsibility." In *Burma* the curriculum is the same for boys and girls save in the middle department of Anglo-vernacular schools (and the middle and high departments of European schools). In the middle classes domestic economy and needle work are compulsory in lieu of geometry, though exceptions are permitted. A ladies' sub-committee of the committee which discussed girls' education in 1916 emphasised the necessity of teaching these subjects to girls in all classes of schools. The manner of giving effect to this proposal is under consideration. A difficulty is found in the extent to which girls' education is carried on in mixed schools. The Female Education Committee of 1914 prepared a new curriculum for *Bihár and Orissa*, which has since come into force. Efforts have been made to give a more practical turn to the teaching of hygiene in the *Central Provinces*, the staff of the normal schools attending first aid and hygiene classes. In the primary schools of *Assam*, where the eastern Bengal curriculum is followed, the same difficulties are encountered which have already been mentioned with reference to Bengal. But some degree of success has been attained in middle English schools with the higher stages of that curriculum, which gives prominence to needlework, hygiene, domestic economy and calisthenics.

It is not to be understood from this account of recent attempts at differentiation that precisely the same course had previously been pursued in schools for both sexes. For years needlework has been taught in the majority of girls' schools and in some provinces special school books for girls are in use. The present attempts aim at a wider differentiation and the improvement of the teaching of special subjects. Where success has hitherto been only partial, this is due to paucity of qualified teachers and sometimes to the attitude of parents. Speaking of the attempt described above to introduce a special curriculum into the majority of secondary schools in Bengal, Miss Bose says, "This proposal is an excellent one, and the school authorities agreed to follow the syllabus which would be laid down by the inspectress, but the people of Bengal seem to appreciate the matriculation certificate more than any useful practical course of studies, and the girls set their hearts on passing the matriculation and do not yet realise the usefulness of the other standard of work. They are dissatisfied with the new ideas and the authorities complain that they are fast losing their pupils. They are rapidly taking admission into other schools."

Mr. Hornell endorses this remark but says that no other recognised test than the matriculation exists in Bengal, and that what is wanted is a school leaving certificate, inaugurated by government, conducted by a recognised public authority and adjustable to the varying needs of different classes of pupils. He adds that proposals to this end are now under consideration.

430. Whatever may be the differences of opinion between the advocates and opponents of special subjects for girls, there appears to be little doubt regarding the pressure entailed by the study of certain subjects for examination purposes, the need for some instruction in hygiene and the care of children, the appreciation of simple domestic accomplishments, where these can be taught, and the possibility of teaching them if only suitable staff can be employed.

Physical training.

431. A satisfactory feature of the quinquennium has been the increased attention paid to the physical training of girls. The traditional bias among the better classes against physical exertion and the customary diet are an obstacle to continuous study and a serious handicap in life. The average student, says a lady engaged in teaching in Bengal, is very weak; she needs good food, exercise and often remedial gymnastics; she comes to college with an impaired appetite and an inherited dislike of eating anything save rice, vegetables and sweets.

In 1914 a course of physical training was organised for teachers of girls' secondary schools in or near Bombay. The Young Women's Christian Association lent the services of a certificated athletic mistress. Forty-one teachers completed the course, which is reported to have been most beneficial. Unfortunately more than half these teachers have now dropped out of the profession, and a second course has been started to supply the deficiency. The local

Government are contemplating the appointment of a directress of physical training for girls. In Bengal, as well as lessons in hygiene, games and drill are now practised in mission schools, and a centre was opened for the instruction of teachers in Calcutta. Drill is also practised in some of the Hindu schools where there are female teachers. But parents raise objections, which are insuperable where *pandits* are in charge of schools; and the lack of playgrounds makes games impossible in most schools.

Teachers.

432. It has been observed that one of the chief obstacles in the way of the education of girls is the dearth of teachers. Parents like their girls to be educated by women. Old men are tolerated. But they are often inefficient. The condition of things differs largely, not merely from province to province, but from one part of a province to another. In two circles of Madras only one third of the teachers are women; in another over 81 per cent. are women. In one circle of the Central Provinces nearly all the teachers are women; in another, composed of Marathi districts, less than half are women.

There has been improvement in training and qualifications, though this is sometimes masked where rapid expansion has occurred. In the secondary schools of one of the Madras circles teachers of the collegiate grade have increased from nine to forty and only 29 untrained teachers are employed. But in the elementary schools of that presidency, though the number of trained teachers has increased from 2,354 to 3,077, the percentage has fallen, owing to the demand, from 62 to 56.

Their pay.

433. One of the results of the dearth of women teachers is the rate of pay they can command. While in other countries (and, it may be added, in European schools in India) a woman doing the same work as a man is usually paid less than a man, in respect of Indian women teachers the reverse is the case. The Assam report says that the qualification of an intermediate pass is coupled with a demand for a salary of ₹130. A mere man with the same qualifications would probably be content with ₹30. A woman graduate in the northern circle of Madras ordinarily draws from ₹110 to ₹250, and a woman secondary teacher in a government school from ₹40 to ₹100. In the model primary schools of Bengal the head teacher, if a man, gets ₹16; if a trained woman, ₹30; and the pay of the second teacher is similarly varied from ₹12 to 25, etc. A male teacher in a board primary school in the Central Provinces receives on the average ₹12·2, a trained woman receives ₹14·8.

Special concessions.

434. During recent years certain concessions have been made in the case of women members of the inspecting staff and women teachers. The Civil Service Regulations were framed to meet the case of men; there are many small points in which they are unsuitable for women. The whole subject was carefully considered during the quinquennium. Under general orders local Governments are empowered to grant conveyance allowances, save to gazetted officers recruited in England. They have been permitted to treat female educational officers (including clerks, matrons and nurses) of the third class whose pay is not less than ₹50 as officers of the second class for purposes of travelling allowance rules and to sanction first class rates by steamer to officers of the status of assistant inspectresses. They may dispense with the medical examination of ladies by commissioned or male medical officers or authorise their examination by lady doctors under suitable safeguards. House rent allowance of ₹20 a month may be granted to lady assistants in training colleges, free quarters or an allowance may be given to government servants of the status of schoolmistresses, assistant inspectresses, *zenana* governesses and peripatetic needlework teachers and furniture may be provided in such cases. The Government of India also recommended that children of lady teachers should receive free education in the school where the mother serves and in the case of low-paid teachers in schools of any grade, and that facilities should be given for making tour-arrangements. They have addressed the Secretary of State on other matters.

Training of teachers.

435. There are three colleges for the training of women. These are the Diocesan College and the Loreto House School in Calcutta, which are also arts colleges, and St. Bede's College at Simla. These colleges contain 49 students and seven more are studying in men's colleges.

There are also 111 training schools for women with 2,651 students, while 106 women are reading in schools for men.

The distribution of these students, both in colleges and in schools, and their proportion to the number of girls under education in secondary and primary schools are as follows.

	Number of women under training.	Percentage of women under training to number of girls in public schools.
Madras	863	·28
Bombay	713	·53
Bengal	152	·053
United Provinces	213	·33
Punjab	263	·48
Burma	245	·19
Bihar and Orissa	137	·14
Central Provinces and Berar	107	·29
Assam	30	·11
North-West Frontier Province	....	....
Minor Administrations	90	1·0
TOTAL	2,813	·25

The increase in the total number of students under training has been 1,200 or 74·4 per cent. There are no training institutions for women in the North-West Frontier Province, and Bengal is peculiarly backward in respect of training arrangements. Training facilities were commenced during the quinquennium at Delhi where a government institution was opened, in Assam where two mission classes were started, and in Ajmer-Merwara where a normal class has been opened under a mission at Nasirabad.

Among the 31 schools maintained by government are nine institutions in Madras, the divisional vernacular training colleges for women in Bombay, the classes at the Eden High School, Dacca, the Lahore Normal school for women, the Badshah Nawab Razvi Training College at Bankipore and the two government normal schools in the Central Provinces. But most of the schools are of the aided type and are largely maintained by missions.

436. The success and popularity of training vary considerably. In Bombay increased stipends have been given both to bring girls to the institutions and to keep them at ordinary schools preparatory thereto. In Madras, the accommodation is insufficient to permit of the admission of candidates. Ordinarily speaking the supply is inadequate and, in addition to stipends, other means have to be devised. One of these is the establishment of homes for widows. Such homes exist in Madras, Bombay and Bengal. In the last named presidency government supports a home, and two have been opened in connection with state high schools in Madras. One of these, at Triplicane in Madras city, has been particularly successful, and has attracted 54 widows. The inspectress says of it.

"The establishment of the hostel should become a valuable source of supply for the teaching as well as the medical profession, as the young Brahman child widows are for the most part distinctly intellectual and merely require the requisite opportunity to show what can be achieved by natural ability coupled with untiring application. Within the next ten years I venture to state that most of the secondary schools in this presidency can be staffed by trained and well-qualified Brahman widows and when this is accomplished a powerful impetus will then be given to popularising secondary education amongst the Hindu people. The multiplying of such hostels for Hindu widows would be the speediest means of spreading education and money thus expended must eventually produce the very best results both as regards diffusion of education and also in raising the standard of efficiency in all classes of girls' schools."

Another scheme is the training of a man and his wife, who are posted in the same village and become the master and the mistress of the boys' and girls' schools.

The courses pursued in the training institutions approximate to those for men, with the exception that needlework, domestic economy, etc., are included.

It is recommended by some (including the deputation which waited on the Secretary of State) that the training of Indian girls should be carried out in England. Government has instituted two annual scholarships for study abroad, one tenable by a European, the other by an Indian, girl. Preparation for teaching is one of the subjects contemplated.

Scholarships.

437. Special scholarships are generally reserved for girls. Their number has been increased during the quinquennium. Thus, in Bengal there were in 1912 girls' scholarships to the number of 107, all of which save 11 were for eastern Bengal. There are now 195, of which 30 are college scholarships. Special scholarships are given in the United Provinces, but almost solely to encourage girls to become teachers. In some provinces, however, there is no such reservation. This is the case in Bihar and Orissa where girls compete with boys and, in 1916-17, carried off 105 scholarships. The committee which examined the question of girls' education in that province recommended the reservation of scholarships for girls and it is intended to bring this recommendation into effect when the proposals for increasing the number of scholarships materialise. The two State scholarships mentioned in the preceding paragraph are of the value of £200 a year.

V.—General results and the future.

Summary of situation.

438. The situation may be summarised. Prejudice is in some ways and in some quarters slowly giving way. But, with certain exceptions, active co-operation with government and the boards is meagre. The mainstay of useful work, outside the more important government institutions, is found in the missions. Qualified teachers are still lamentably few. The outstanding feature is the shortness of school life, resulting in the concentration of pupils in the lowest classes and introducing a misleading feature into statistics.

The opinions of reporting officers indicate a mingling of hope and pessimism. They are coloured by the position existing in different provinces and in different kinds of schools. "The time is rapidly approaching" runs the Punjab report, "when female education can no longer be treated as an interesting off-shoot of the general educational system. Discarded boys' schools, out-of-date equipment and superannuated board-school masters will no longer suffice for the needs of girls' schools. Already the want of a stronger inspecting agency and of more normal schools is widely felt. The *purdah* system in the case of Muhammadans and early marriage in the case of Hindus are serious obstacles in the way of efficient organisation but so long as inspectresses, Christian Missions, the Arya Samaj, the Khalsa Diwan, the Dev Samaj and other pioneers in the educational movement continue to regard difficulties not as excuses for inertia but as incentives to exertion even these obstacles will not prove insuperable. Given funds, the possibilities for organisation and development appear as great as in the early days of boys' education in this province."

439. The demand for vernacular education is admittedly weak and here, as Mr. Hornell says, the difficulty is one of machinery as well as of funds. There seems little doubt that the appreciation of English education is growing. Probably the future of girls' education lies largely in an extension of middle English schools. Such institutions are growing in popularity and their increased output should form a nucleus of educated opinion on the part of Indian women as well as a larger field of selection for teachers. The Bengal Director considers that, in the grades above the primary and as regards the general aspects of the problem, it is fair to say that with more funds at disposal a real advance can be made. But, he proceeds, "we may at least hope that in dealing with the education of girls we shall not repeat the mistakes which have been made in the education of boys. There will be no excuse if we do, for the girls of Bengal with comparatively few exceptions do not have to be trained to scramble in the open market for a living. For many years yet secondary and

higher education will be confined to the few. Is it too much to hope that we shall be able so to order things that the education given will be a reality? There is only one way of accomplishing this and that is by securing cultured and sympathetic women to work as inspectresses and in colleges and schools and by giving these women as free a hand as possible. If we determine to do this and do not shrink from the bill—it will not be an unlimited liability—we shall be giving Indian women a chance. More than this no education department in India, as it is to-day, could ever hope to do."

CHAPTER XV.

EDUCATION OF CHIEFS, NOBLES AND OTHERS.

Organisation.

440. Special arrangements have been made, somewhat on the lines of the English public school system, for the education of the young Chiefs whose families rule over one-third of the Indian continent. The institutions are amply endowed by the Chiefs and aided by government. Their intention is to fit the young *Kumars* for the responsibilities which will be laid upon them. Relations of the ruling Chiefs other than their heirs, nobles and *sirdars* are admitted to these institutions.

There are four principal Chiefs' Colleges and a fifth in the Central Provinces, a school for the Shan Chiefs and several institutions for zamindars, the sons of wealthy parents, etc., which, though they are not intended for ruling families, may appropriately be mentioned in this chapter.

The four Chiefs' colleges.

441. The four principal colleges are controlled by Councils of Chiefs and political officers, sometimes aided by managing committees. A special branch of the Indian educational service is recruited for their staffs and a number of Indians are also employed. Their names and the numbers of their enrolment in 1916-17 are as follows:—

	Number of pupils.
Mayo College, Ajmer, for Rajputana Chiefs . . .	143
Daly College, Indore, for Central India Chiefs . . .	56
Aitchison College, Lahore, for Punjab Chiefs . . .	115
Rajkumar College, Rajkot, for Kathiawar Chiefs . . .	33

The numbers at the Daly College have to some extent suffered from the war and at the Mayo and Aitchison colleges the minimum age for admission has been raised, small boys being now prepared for the latter at a separate school in connection with Queen Mary's College for girls. The numbers at Rajkot are kept low by the limitation of admission to sons of Chiefs and their near relations, other arrangements being made for the smaller landowners. The fees, too, at this college are rather higher than at the others, ranging from ₹62½ to ₹225 a month.

442. These colleges are characterised by their excellent buildings and grounds, the type of training imparted and the wholesome life lived by the pupils. Discipline is rigid and contrasts strongly with the go-as-you-please methods found in so many of the general colleges and schools. Physical training is compulsory and severe and has resulted beneficially on the physique of the *Kumars*. Games are played with keenness and include tent-pegging and sometimes polo. Religious instruction is imparted. The pupils reside in organised houses, with superintendents. At the Aitchison College teachers have now been placed in charge of the houses, with good results, instead of the less educated *musahibs* or guardians who formerly superintended them. The Principal of the Daly College wishes to give the *Kumars* greater responsibility in the management of their own boarding house affairs.

443. The war has affected the colleges by diminishing the staff, some of whom transferred themselves to military service. At the Mayo College two Indian Civil servants have been employed as professors. The colleges show a good record of assistance in the war. Expensive improvements have naturally

been in abeyance. But over a lakh has been expended at the Aitchison College on buildings, etc., including a Hindu temple and a Sikh *gurdwara*.

444. A special course has been designed for the Chiefs' Colleges, not largely differing from the matriculation and school final courses, but including administration as a special subject. The diploma examination, as it is called, is recognised by the Universities of the Punjab and Allahabad as equivalent to the matriculation. Latterly however the college at Rajkot has prepared pupils for the Bombay matriculation; and no candidates have recently been presented at the diploma examination from the Daly College (where the prevalence of plague in the city led to the temporary closure of the college and some disorganisation in work), though a few of its pupils have appeared at the matriculation. About the time of the examination the colleges are inspected by two selected educational officers, who conduct an oral test and a considerable part of the written examination. It was recently decided to institute school records for the assistance of examiners.

A further course of university standard called the Higher Diploma has also been instituted. It is conducted at the Mayo College. A proposal is on foot for the establishment of a Higher Chiefs' College at Delhi; but, owing to the war, no progress has been made. Meanwhile, the Chiefs who promised donations towards this scheme are contributing interest on their subscriptions for the maintenance of the Higher Diploma classes. Of the 54 who have completed all or part of this further course, 13 were Chiefs, heirs or Thakurs with estates of their own, five are employed under the British government, 19 are employed in Native States, three have joined the police training school, one has joined a university and one is on active service.

445. The colleges, with the exception of the Higher Diploma classes, are of school standard, and pupils who complete the course often proceed to other places of instruction—either the classes just mentioned, or the Imperial Cadet College at Dehra Dun,* or to some college in England or India. An administration class was held at Manpur to which some of the ex-students of the Daly College resorted. Subsequent employment is sometimes a problem in the case of the *sirdars*. But the record of careers of recent students in that college appears to be satisfactory. Eleven have received ruling powers in their States or *jagirs*, one is managing his estate, eighteen are employed in the service of the States and seven are undergoing further study. It is also recorded that ten ex-students of the Rajkot College have been employed by States, one is employed in British India and nine are still pursuing their studies. The details of the further study taken are interesting. Some resort to Indian universities. Others go to England. A Mayo College student who had taken the diploma examination subsequently gained an honours degree at Oxford; another from the Daly College took the M.A. and LL.B. at Cambridge and was called to the Bar; another has joined an agricultural college in England. Of the Kumars of Jamnagar, educated at Rajkot, four are in England, one studying for the Indian Civil Service, another engineering, while another proposes to study medicine.

446. There is a fifth college, the Rajkumar College at Raipur, for the education of some of the Feudatory Chiefs of Chhattisgarh and to some extent of Chhota Nagpur and Orissa. It was not till after the close of the quinquennium recognised for the presentation of candidates at the diploma examination (though its own examination was accepted by the University of Allahabad as equivalent to matriculation), and was not regarded as in the same category with the four major colleges. But it has made great strides during the quinquennium and now resembles them in organisation. Two members of the Indian educational service have been sanctioned for the staff, but only the principal has as yet been appointed. The college is well supported financially and there are now 55 Kumars on the rolls.

447. The school for Shan Chiefs in Burma continues to do good work and contains 88 pupils.

Institutions for Zamindars, etc.

448. The Colvin Taluqdars' School at Lucknow receives sons and relations of the landed proprietors of Oudh. It has 60 pupils and was highly

* Closed, as a temporary measure, owing to the war.

successful at the matriculation in 1917. School leaving classes are now to be opened. A certain amount of agricultural instruction is given. The Court of Wards Institution at Newington in Madras has an average of only eight pupils. It is proposed to establish a Rajkumar College near Madras for the sons and relatives of Rajas, zamindars, etc.

A different type of institution is found in Bombay for the education of the sons of *Girasias* or *taluqdars*. These are at Godhra, Wadhwan Camp and Sadra. A hostel for the sons of zamindars has been erected in connection with the Ranchi Zilla School in Bihar and Orissa.

Queen Mary's College at Lahore is intended for the education of girls of good family. It does excellent work and now prepares candidates for the intermediate examination.

There are several other institutions in various parts of India the organisation and intention of which are not unlike those of the Chiefs' Colleges, although they cater for a different class. Such is Hastings House near Calcutta, a high-fee boarding school with 43 pupils, which was opened during the quinquennium. It prepares for the Cambridge local examinations, and presented eight candidates for the first time, of whom five passed. The United Provinces has Kshattriya schools, of which an excellent specimen exists at Benares. It is hoped to convert this place into a college.

CHAPTER XVI.

EDUCATION OF EUROPEANS.

I.—General.

Intention of European schools.

449. The education of Europeans forms a subject apart. Special institutions have been founded for the instruction of any person of European descent, pure or mixed, who retains European habits and modes of life. Before education came to be an acknowledged responsibility of government, the upbringing of this class appealed strongly to charity, and free schools or special foundations exist for the purpose. Such were the bequest of General Martin, a French soldier, who founded the Martinière Colleges at Calcutta and Lucknow, the Doveton trust, etc. A later bequest was that of the Misses Bruce (daughters of an indigo planter), amounting to about ₹10½ lakhs, which supports 132 poor girls of the domiciled community at various schools. The impulse of self-help, affirmed as a principle by Lord Canning, is still a marked characteristic of European education; a recent benefaction, the Laidlaw fund, amounted in 1913 to about £100,000 and now brings in an annual income of ₹60,000. But, with the recognition of education as a State duty and the impoverishment and growing numbers of those who form the lower strata of the domiciled community, government has had to assume a greater share of the burden and recent years have seen large imperial grants made for the improvement of the schools.

Admission of Indians.

450. European schools are not closed to Indians. The usual rule is to allow the admission of 15 per cent. of non-Europeans. Armenians and Parsis naturally resort to them and are peculiarly capable of benefiting from the education given. In some provinces it has been found desirable to raise the limit of admission of non-Europeans. In Bombay it is now 20 per cent. of the enrolment and in some schools of that presidency has been allowed to rise to 33 per cent. Ordinarily, however, when the number exceeds 20 per cent. the school ceases to be governed by the provisions of the European school code, though it continues to teach the same curriculum. It then becomes known as an 'English-teaching school'—a type of institution peculiar to the Bombay presidency.

Apart from these legitimate admissions, there is no doubt an endeavour on the part of certain classes to enter such schools under the guise of Europeans of mixed descent. The definition of the admissible class is wide and

vague, and it has sometimes been represented that it should require evidence of European blood on the father's side. The Bengal Director says that the community which claims the privileges of a European education is composed of many nationalities, such as Indian Christians, West Indians, Philippinos, Chinese, etc. He quotes the Inspector of European schools in Bengal to the effect that many of the Eurasians who live in the Kintal district of Calcutta and crowd into schools organised on charitable lines have probably no drop of European blood in them; and he considers that the problem of the education of the domiciled community would be enormously simplified if the European system could be confined to those for whom it was intended.

Location and kinds of schools and their management.

451. The oldest schools, charity schools, orphanages and many mission institutions, are naturally situated at the larger centres of population. As the European community spread up country, schools were opened at other places, especially at large railway centres. But the advantages of a hill climate for children of European extraction were obvious. In 1859 Bishop Cotton appealed for a school in the Himalayas. Many European schools are now to be found in the hill stations or in salubrious and cool places like Bangalore; wealthier parents prefer schools in such localities; and some of the homes and orphanages have been established there.

The types of institutions are numerous. There are the old foundations, such as the Martinières, the Calcutta Free school, etc. Among these, the Doveton College in Calcutta was taken over by government and closed during the quinquennium, the income being devoted to scholarships. There are more modern schools, founded by the aid of endowments raised from subscription, but largely aided or even managed by government. Such are the Bishop Cotton schools and the Lawrence military schools (called after Sir Henry Lawrence), which are found in various parts of India. There are industrial homes for orphans or destitute children—St. Andrew's Colonial Homes at Kalimpong in the Himalayas and St. George's Homes at Kodaikanal in Madras, the latter assisted from the Laidlaw fund. There are railway, church and mission schools and private institutions.

Management.

452. Government plays but a small part in the management of European institutions. More than 400 out of the total of 444 institutions are of the aided type. Some, such as the numerous excellent schools maintained by the railway companies for children of their employees, are undenominational. But the majority are managed on denominational lines, largely by religious bodies. As an instance, the figures for Bengal may be quoted. Out of the 79 institutions in that presidency, 5 are managed by government and 15 (including the Young Women's Christian Association classes) are undenominational. Of the rest, one is Jewish, 4 are non-Conformist, 2 Church of Scotland, 14 Church of England and 38 Roman Catholic. Thus nearly half the schools are under Roman Catholic management, and it may be added that these contain considerably over half the pupils. Bombay also has 79 European schools, and no less than 43 of these are Roman Catholic. This is not unnatural. Though only a fifth of the actual Europeans in India are Roman Catholics, that Church claims over a half of the mixed race. The organisation of the Orders, too, lends itself to the effective and economical conduct of the schools.

Concentration.

453. This denominational character of the schools, notwithstanding that the European code (unlike the rules which govern Indian schools) contains a conscience clause, is a powerful factor in their organisation and doubtless tends to some waste of effort. Not only do several schools spring up where one would suffice and prove more effective, but, as Mr. Hornell remarks, the desire to retain children in particular denominational schools leads to an undesirable shower of stipends, which are often bestowed on children who cannot benefit by a higher education. The difficulty was discussed at the Conference on the education of the domiciled community in 1912 (see paragraph 460), but only a very general resolution was passed to the effect that concentration of schools is desirable where possible. In Bombay it has been found possible to close six schools and amalgamate two. Persuasion is the only means of effecting this reform and does not appear to be generally efficacious. In Madras the number of schools has increased—a matter which the Director

says is not altogether one for congratulation, as there is still overlapping in Madras city, and a number of mofussil towns, capable of supporting one strong school, have two or more relatively small ones. Reform has not been found feasible in the Punjab. The Burma Director similarly complains that nothing has been done to carry out the resolution and that the eighteen high schools of the province have an average of seven pupils to a class.

454. The code of 1905, under which European schools in all provinces work, was the outcome of the conferences and committees which considered this branch of education at the beginning of the century. First circulated for the opinion of local governments, it was then applied to all provinces, but with permission for changes indicated by provincial circumstances and approved by the Government of India. In 1908 it was ruled that local Governments could make changes without such reference save where alterations appeared to constitute a fundamental departure from the principles underlying the code. Such changes as have taken place affect mainly the class-organisation and the system of grant-in-aid. As these can best be treated in connection with developments during the quinquennium, they are dealt with in paragraphs 467 and 477-478. *The European School Code.*

455. There is a special inspecting agency for European schools. This consists of a single inspector in each of the larger provinces. In Madras this officer has certain other functions in connection with training institutions, *e.g.*, the conduct of the teachers' certificate examination. In Burma he is also the inspector of normal schools. During the quinquennium the Central Provinces, which formerly shared with Bombay the services of a single inspector, obtained its own separate officer, who is also the inspector of science teaching in schools for Indians. Bihar and Orissa has as yet no such inspector, the work being performed by one of the circle inspectors. *Inspecting agency.*

II.—Figures of Institutions and Pupils.

456. The number of European schools has increased from 394 to 446 and of pupils in them from 33,720 to 42,681. But 3,151 of these are non-Europeans, while 3,015 Europeans are studying in schools for Indians. The result is that 42,545 Europeans and persons belonging to the domiciled community are under instruction, against 34,372 five years ago. In the last review it was stated that the total number of Europeans and persons belonging to the domiciled community in British India and the Native States was 301,433 but that, as over 75,000 of these represented British troops and as a considerable number of parents send their children home for schooling, it would not be proper to calculate as greater than 240,000 the population for whom educational facilities must be provided. Those under instruction constitute 17·72 per cent. of this figure. But the number of children shown in the returns as at school is not exhaustive. The Bangalore figures are now included, but not those of pupils in smaller agencies, for which statistics are not collected, or in Native States. Nor has it been found possible to collect figures of children studying in regimental schools. Notwithstanding the increase in population and the fact that many European children study through the secondary stage, it may fairly be assumed that all children are receiving some kind of education. Mr. Stone, speaking of the Madras Presidency, writes as follows. *Figures of schools and pupils.*

> " According to the census of 1911 the total number of Europeans and Anglo-Indians up to the age of 15 was 12,731 and the annual percentage of increase was only 1·7. For estimating the school-going population, at least a third of these, *i.e.*, 4,243, have to be left out of account as five is certainly the earliest age at which a child will be sent to school. Of those between 5 and 15 those have to be excluded whose parents, officials, non-officials or missionaries, intend to send them to Europe or to America for their education. With these deductions and even assuming that in the 6 years since 1911 Europeans and Anglo-Indians have increased by 10·2 per cent. it is impossible to believe that there is in this Presidency anything but a small number of children not in school. I wish to emphasize these figures in view of the statements that have been made to the effect that there are large numbers of European and Anglo-Indian children who receive no education."

The inspector of European schools in Bombay says that practically every child goes to school.

Detailed figures regarding distribution by provinces, classes of schools, increase by periods, etc., are given in supplemental tables 166 to 180. The average enrolment in an institution is 96 as against 86 in 1911-12. Attendance is 87·2 per cent.

III.—Expenditure.

Expenditure.

457. The total expenditure, direct and indirect, rose from ₹65,24,645 to ₹95,53,048. Of this sum, direct expenditure accounts for ₹48,16,523 against ₹34,53,496 in 1912. The heavy indirect expenditure occurs mainly under the head 'miscellaneous' and represents for the most part hostel charges met by fees and subscriptions.

The expenditure is met as follows:—

	₹		₹
Provincial revenues . .	36,46,883	Fees	33,41,183
Municipal funds . . .	27,908	Endowments	4,02,226
		Subscriptions, etc. . .	21,34,848
Total public funds . . .	36,74,791	Total private funds . .	58,78,257

Imperial grants.

458. The Government of India have from time to time made grants for European education. In 1906 a recurring grant of ₹2,46,000 was given. Further grants made in 1911-12 and during the quinquennium amount to ₹7,52,000 recurring and ₹36,18,000 non-recurring. These sums included two special grants of ₹30,000 and ₹42,000 for the cities of Madras and Calcutta respectively, intended to provide facilities for the expansion of education among the poorer classes of domiciled Europeans and Anglo-Indians.

Fees and average cost of pupils.

459. The average annual direct cost of a pupil is ₹115·4. Of this sum 61·7 per cent. is derived from private funds against 44·3 per cent. in a school for Indians. The average annual fee in a European secondary school is ₹39·5 against ₹13·7 in a secondary school for Indians. If indirect expenditure (which includes hostel charges) were taken into account, the average fee for all pupils would be raised from ₹36·6 to ₹78·2. Thus, notwithstanding increased assistance from government, the tradition of self-help is maintained.

IV.—General developments.

Conference of 1913.

460. A general conference on the education of the domiciled community was held at Simla in July 1912. It was presided over by Sir Harcourt Butler and included thirty-nine representatives of various interests, among whom were the Bishops of Bombay and Lahore, the directors of public instruction and persons engaged in active educational work in schools of different denominations. Sir Sayid Ali Imam, then Law Member, and the Most Reverend Archbishop Kenealy also attended some of the sessions. Among the most urgent resolutions passed were those dealing with the extension of education to children who do not now attend school and the improvement of the pay and prospects of teachers. Others dealt with the grading of schools, the training of teachers, the foundation of a college for Europeans, grants-in-aid, examinations, scholarships and medical inspection and supervision.

The questions at issue were referred to local governments and the Government of India have issued their final orders. The decisions on the most important questions will be found below.

Proposal for compulsion.

461. The conference had declared itself in favour of compulsion. With the exception of Bombay the opinion of the local Governments is against compulsion. One of the chief reasons for this decision is the fact that the voluntary system is found to be working effectively. As already stated there is no reason for supposing that any members of the domiciled community go uneducated. The arrangements made for destitute children at places like Kalimpong and Kodaikanal, the establishment of free or low-fee boarding schools and the grants made for the cities of Madras and Calcutta should ensure the education of all children.

462. There are seven so-called colleges for Europeans, containing 722 European students. But of these students, only 103 are undergoing education of the collegiate standard.* *Collegiate education.*

Of these, five are arts colleges—one for men and four for women. In 1907 Mr. Orange remarked that the colleges were really the top classes of schools in which a little special teaching was given, generally up to the intermediate standard. The majority contained no pupils and Mr. Orange prophesied their speedy disaffiliation by the universities. In that year there were fifteen such departments. In 1912 there were six. During the quinquennium three of these have closed. But the addition of the Bangalore figures places the number at five. These are, for males St. Joseph's College, Bangalore, and for females Woodstock College, Mussouri, All Saints' Diocesan College, Naini Tal, the European girls' high school, Allahabad, and the College of the Sacred Heart, Bangalore.

The two professional colleges are the training class at Sanawar near Simla and St. Bede's College (also a training institution) at Simla. The former is for men, the latter for women.

Europeans also resort in small numbers to colleges for Indians. There are 445 studying in such colleges. So the total number undergoing collegiate education is 548. Some colleges offer special facilities for Europeans. Four such are enumerated in Calcutta, with arts or training courses or both. The engineering colleges at Roorkee and Sibpur also have special hostels and offer attractions to European or Anglo-Indian students.

463. There is no separate university organisation for Europeans. The students in the arts colleges read the courses prescribed, and appear at the examinations conducted, by the universities which control colleges for Indians. This is sometimes made a cause of complaint. *European students in Indian universities.*

It is also asserted that Europeans do not resort in greater numbers to colleges because the higher posts for which a college education would qualify them are no longer open to their competition. This is to some extent true as regards the imperial services; and, as regards posts for which recruitment is made in India, Mr. Hornell says that the avenues of employment to which an Indian university leads are gradually becoming less accessible to Anglo-Indians. On the other hand, it is not evident that better pay is to be gained by the attainment of a degree; the Cambridge Senior certificate will generally secure a good post; and the difficulty of recruitment in England has opened a wide field to Anglo-Indian lads. The standard of European secondary education is in many cases a high one and (says Mr. Hornell) the Cambridge senior school certificate is, in the opinion of those who have had long experience of both systems of examination, equal to an ordinary degree of the University of Calcutta. This view is certainly held by authorities in England, *e.g.*, the London Inns of Court.

464. The vexed questions nevertheless remain whether on general grounds it would be better to continue European education on separate lines to the termination of the collegiate course and, if so, how this can be economically effected? It is natural that members of the domiciled community and many interested in its welfare should press for a separate university organisation. But some authorities who are fully competent to speak on the subject hold a different view. They point out that any such scheme must be very costly, that the Cambridge and departmental examinations are accepted for admission to the existing university courses and that excellent facilities for the teaching of subjects which Europeans might be expected to select, such as Latin and Greek, exist in the mission colleges. *Proposal for a separate university.*

The conference had suggested either the establishment of a separate university arts college with a view to carrying on the education of Europeans along separate lines through the collegiate grade or the addition of graduate courses in arts and science to any training college supported for that community. The former alternative is universally condemned by local Govern-

* In general tables III, etc., for Bangalore, a number of students in European colleges, but not in the college classes, are shown as college students. The distinction between these and those reading in college stages is made clear in this chapter, the chapter on the education of girls and general table VA.

ments as unnecessary and expensive and the latter has met but with little support. The Government of India are of opinion that collegiate instruction should be obtained by Europeans and Anglo-Indians in the future as in the past from the existing Indian universities and that until the numbers attending any university are sufficient to justify a separate college the community should make use of the existing college system; but the ideas of separate hostels or arrangement for separate boarding and tuition are favoured.

465. Such being the orders passed, two partial solutions of the problem may be noticed.

(*i*) One occurs in the Bengal report. Though it is not fully in accord with the spirit of the orders, it provides a method whereby, without great additional expenditure, Europeans desirous of pursuing a separate college education may be enabled to do so. It is pointed out, in connection with the re-organisation of the Cambridge examinations, that the senior local will henceforward be regarded as the conclusion of the general school course; that the new Cambridge higher school certificate, which is to be earned after a further two years' study, will provide a course equal to, if not higher than, the intermediate; and that the full certificate of the Cambridge higher local examination, if taken at one sitting, is quite equal to an honours degree of the University of Calcutta. If the existing institutions can prepare candidates for these certificates, a university course will be provided without any break in the system of education. Considerable efforts, says the Bengal report, are being made by most European secondary schools to provide higher education. Inducements are held out to pupils to proceed to the higher local courses and during the past year 34 passed this test from schools in Bengal, six doing so with honours and five with distinction.

(*ii*) The second solution is intended to facilitate study at the existing universities. Its feasibility was to some extent recognised in another part of the resolution passed in 1912, which was to the effect that hostels for the domiciled community should be established in connection with existing colleges. One such scheme has since matured. The Anglo-Indian Collegiate Hostel at Allahabad was opened in July 1914 with fifteen students. "Strenuous efforts are now being made to induce the Anglo-Indian community to support the hostel to an extent which will justify its permanent establishment."

School education.

466. The standard classification of European schools is into primary, middle and high stages. A complete school teaches up to the high stage and ordinarily comprises nine, ten or more standards, the majority of schools teaching up either to the middle or to the high stage. The courses differ slightly according to provinces and to the examination taken at the conclusion of the course. The subjects generally taken in the high school are English, the whole of arithmetic, a second language, which may be Latin or an Indian vernacular or a modern European language, geography, history, algebra (including easy quadratic equations, indices, surds, arithmetical and geometrical progression), geomstry as covered by the first four books of Euclid, mensuration, trigonometry and logarithms, physics, physiology, logic, political economy, drawing, book-keeping, botany and domestic economy and hygiene. Of course not all these subjects are taken by any one student. A considerable latitude of choice is permitted. The principal subject of discussion during the period has been the desirability of introducing more practical characteristics and the possibility of instituting two distinct classes of schools, one for literary and the other for more utilitarian studies. The conference of 1912 resolved that the great majority of high schools for boys should adopt a more definitely modern and practical curriculum and should be described as secondary schools, while a few schools should teach curricula leading to the universities and the liberal professions and be called collegiate schools. Local governments, when consulted, were not in favour of this distinction, and it was thought better to introduce practical elements into the existing secondary schools. The Government of India agreed with this view.

The difficulties which would arise in giving effect to the resolution of the conference are not unlike those which appear to preclude any possibility of instituting for Indians schools of practical secondary education which do not profess to give a preparation for the university. The secondary school would

at once be regarded as of lower status and parents would hesitate to enrol their children.

Establishment of more practical courses.

467. As a matter of fact some local Governments had already attempted to establish a bifurcation of studies similar to that recommended by the conference, and the history of these endeavours is illustrative of the difficulties. In Madras, three alternative courses exist in middle schools. One of these courses is regarded as complete in itself. The others lead to two different types of high school preparatory respectively for the university and for business life. The attempt has not elicited much response, apparently owing to the fact that the same school attempted with inadequate staff to grapple with the two kinds of courses. Though no change was made in the curriculum during the quinquennium it has been found possible to some extent to meet the criticism of lack of vocational training by a development of the special subjects training centre in Madras. This centre provides instruction in domestic economy (including cookery, general and medical housewifery, needle-work and dress-making), manual training, physical training and singing. Qualified lecturers and instructors here train school teachers and also tour in the mofussil with a view to popularising these subjects. Special class rooms have been fitted up in important schools and practical cookery is now taught in thirty-nine institutions. The training in the Swedish system of free gymnastics is said to have been particularly successful. Some of the schools in Bombay now teach carpentry, needle-work, cookery, dress-making. etc., and a syllabus in commerce was introduced.

The most complete attempt at bifurcation has been made in Bengal. It was stated in the last review that as the result of discussions in 1910 the elementary school in Bengal offered a complete course intended to cover 9 years up to the age of fourteen. The pupil who does not require a distinctly literary education may at that stage proceed to a higher elementary school which provides both general and supplementary courses, the latter comprising commercial, industrial, agricultural and domestic subjects. As an alternative the pupil of the lower elementary school might on completing the third standard at about the age of eleven transfer himself to a secondary school teaching the subjects laid down for the Cambridge school examinations. There are in all four classes of schools—on the one hand elementary and higher elementary, on the other secondary and higher secondary. This grading of schools is regarded as unsatisfactory and the supplementary and vocational courses are not popular. Mr. Hornell regards this as due not to any system in the grading but rather to defective organisation of the vocational courses, lack of co-operation with employers and the fact that the examinations are held by members of the department who are not experts in the special subjects. He proposes that the elementary, higher elementary and some junior secondary schools should be graded as elementary schools, the course continuing unbroken to the end of the eighth standard and including during the last two years a specialised course of vocational training which should be conducted in a few properly equipped centres with staffs of specialists.

Vocational schools and orphanages.

468. If the prospects of bifurcation with a view to vocational study do not appear to be rosy as regards the majority of schools, it is yet to be remembered that there are various institutions of a special kind, which, whether or no they prepare pupils for the ordinary courses, lay themselves out to fit the poorer class of children for the problems of their life. The Lawrence military schools of Sanawar near Simla, Murree, Mount Abu and Ootacamund are modelled on severely practical lines. They are managed by committees under the general control of the Army Department. That at Murree was transferred to the management of the Government of the Punjab in 1913 and now admits other than military pupils. But the interests of soldiers' children remain fully safeguarded and, while the school has been greatly improved in respect of buildings, etc., it retains its original character. These institutions, situated in quiet and healthy places in the hills, with a quasi-military discipline, wholesome outdoor activities and their own traditions, form admirable training grounds. The same may be said of St. Andrew's Colonial Homes at Kalimpong, managed by the Church of Scotland Mission and

preparing 577 waifs, orphans and poor children for farm work in New Zealand, for employment on the railways, plantations, etc., of India, and now above all for the army. A similar institution, St. George's Homes, has recently been started at Kodaikanal in Madras and is maintained by charity and State grants. There are other excellent institutions, among which may be mentioned the Mayo Industrial Orphanage for girls at Simla.

469. There are also places which cater specially for the needs of the depressed Anglo-Indian of city slums. These are less happily situated. One such among many is the Catholic Male Orphanage in Portuguese Church Street, Calcutta. The Brother Provincial of the Order of the Irish Christian Brothers has pointed out the results of the present location of such institutions, where the pupils can easily repair home for the holidays and lose, in the depraved surroundings of the slums, all the good which they derive from their school life. He considers that boys should be removed to the country and there kept at school entirely till they are fit for work, and he has asked government to assist in removing the school in question to some site near Asansol. Mr. Hornell agrees with him and considers that the only solution of the problem presented by the lower strata of Anglo-Indians in the great cities is the removal of the children from their present surroundings. The idea is not a novel one. Proposals have from time to time been put forward for the bodily transfer of city schools to good open sites where practical instruction in agriculture, planting and other industries might be imparted and the whole outlook of the child's life changed. Financial considerations and the difficulty of eliminating vacations present obstacles.

470. In addition to the institutions mentioned in the first part of this paragraph and the industrial centres at Madras mentioned in paragraph 467 there are other places which impart vocational instruction. Among these are the classes for commercial studies and technical apprentices maintained by the Young Men's Christian Association and the Young Women's Christian Association in some of the larger cities, the special arrangements made for Europeans at the engineering colleges at Roorkee and Sibpur, the railway apprentice classes at Jamalpur and elsewhere, the sub-overseer and domestic science classes at Kurseong, and the numerous classes attached to ordinary schools, where manual work is taught to boys and cookery, needlework and lace-making to girls. The domiciled community owe a deep debt of gratitude to the missions which have interested themselves in their practical welfare. Even where nothing but the ordinary curriculum is taught, occasionally with optionals of doubtful utility, the thrift, cleanliness and bright surroundings, characteristic of many of the Roman Catholic schools in particular, afford an object lesson in domestic economy more speaking than many text-books.

Examinations.

471. The middle examination is now used mainly for the award of scholarships or as a leaving examination where, as in Madras, there is a middle course complete in itself. The elementary schools of Bengal lead up to a leaving certificate. The ordinary high school may prepare for the departmental high school examination or school leaving certificate, the Cambridge school examinations or the matriculation of an Indian university.

The number of Europeans who passed these tests in 1916-17 is as follows :—

Departmental High School Examination	203
Cambridge Senior Local	259
School leaving Certificate	104
Matriculation	23

The inherent advantages of the departmental examinations are that they prescribe a course of subjects suitable for Indian conditions and are susceptible of combination with school records and oral and practical tests, so as to form the basis for a regular school leaving certificate. Their adventitious points are that in some provinces they are still regarded as the sole test for the award of scholarships (which obviously cannot be decided among candidates at different examinations) and for entry upon training courses.

The Cambridge authorities on the other hand are a more permanent body than any agency to be found in India and hence continuity and uniformity of

standard are secured to an extent which is impossible in departmental examinations. They can also command an army of expert examiners. The papers reflect the most modern educational developments in England. Above all, the examinations are held in every part of the Empire, under the aegis of a renowned university, and carry recognition in the United Kingdom and the Colonies and exemption from certain examinations, such as Responsions at Oxford, the Previous at Cambridge and the Entrance Examination of the Inns of Court. But these tests, as pointed out by the Punjab Director, are not specifically suitable for schools in India. To take only a single example, they contain no reference to Indian coinage, weights and measures. Mr. Hornell suggests that the Cambridge Syndicate should be asked to include Urdu as compulsory for boys and housecraft as compulsory for girls in the senior local examination. Again, these examinations cannot take effective cognisance of the conditions of particular schools or the records of individual pupils.

The university matriculations are not particularly suitable for European schools. They admit, sometimes with reservations as regards the subjects taken by students, to university courses—but so do the Cambridge and departmental examinations. Perhaps their sole advantage is that they are considered to be easier. Indeed, the university of Calcutta accepts the senior local as the equivalent of the intermediate, if it is taken in certain subjects and with honours and if, after a further year of study the candidate passes in certain supplementary subjects.

In Bengal there is an elementary school leaving certificate which closes the sixth standard of the elementary school course. This is necessary, since that course is complete in itself. But there is no departmental high school examination; all the schools prepare their pupils for the Cambridge locals. In the United Provinces the Cambridge examinations were introduced as the sole test in 1916. In Burma on the other hand the departmental examination completely holds the field—save for a few who take the Calcutta matriculation. The European school managers in that province are not in favour of the Cambridge examinations; it is felt that the advantages of an examination which is recognised in England are more than counterbalanced by the drawbacks of a purely external examination designed for schools working under entirely different conditions.

Elsewhere these two kinds of examinations are ordinarily found operating side by side in the same province and often in the same school. There are also a few pupils who take the matriculation. This multiplicity of examinations, where it exists in the same institution, does not make for easy organisation or effectual teaching.

472. The conference of 1912 recommended that there should be two secondary school certificates, called respectively the first school and the leaving certificate. In each case a necessary condition was to be attendance at a school for a specified period and completion of a course as set forth in the pupil's school record. In addition, the passing of the Cambridge University junior school certificate or junior local examination would be required for the first certificate; that of the Cambridge senior school certificate examination, higher local examination or senior local examination for the leaving certificate. It was found that the local Governments hold widely varying views regarding the adoption of the Cambridge examinations. The Government of India found it necessary to make a second reference to them on this particular question and no decision has yet been reached.

473. The amount annually spent on scholarships has risen from ₹85,835 to ₹1,33,516. *Scholarships.*

The annual State scholarship of £200 a year tenable for three or four years in the United Kingdom has been raised to £250 in the case of those scholars who reside in a college at Oxford or Cambridge. In addition, an annual scholarship of £200 a year was instituted during the quinquennium tenable in the United Kingdom by a girl of the domiciled community for training in educational or medical work. In the case of this scholarship the degree of an Indian university is required. Students of the domiciled com-

munity also participate in the State technical scholarships and in those which have been established to enable girls to prepare for admission to the Lady Hardinge Medical College at Delhi.

Scholarships tenable in India are awarded to Europeans on a regular scale laid down in the various codes. (In Assam there are no specified scholarships but awards are made in individual cases.) In Bengal the number annually offered and the monthly rate are as follows :—12 junior elementary scholarships of ₹12 awarded on the result of the elementary school certificate examination; 6 senior elementary of ₹12 on the result of the supplementary class final examination; 4 junior secondary of ₹12 on the result of the Cambridge university junior school leaving certificate; 6 senior secondary of ₹20 on the result of the Cambridge senior school leaving certificate; 3 collegiate of ₹30 on the result of the intermediate examination and 2 final scholarships on the result of the B. A. or B.Sc. examination.

As a result of the recommendations of the Conference eight special scholarships are now annually awarded to the children of soldiers.

Qualifications and pay of teachers.

474. Of 3,318 teachers in European schools, 1,636 are trained and 335 possess a degree. There has no doubt been considerable improvement in the quality of teachers. This is especially so in Madras, where 473 are certificated out of a total of 670. Ordinarily speaking, however, teaching has not assumed the position of a regular profession, especially among men. The figures of certificated teachers are increased by a large percentage of unpaid missionary workers—no less than 149 in Bengal out of a total of 546 teachers. These honorary workers are qualified and are returned as such. In the case of paid lay teachers the prospects are not sufficiently attractive. In Bombay the pay of teachers in secondary schools only just exceeds ₹86 a month. In Bengal it is better. There the pay of teachers recruited in India is ₹205 in the case of trained men and ₹150 in that of trained women; for untrained teachers it is ₹213 for male graduates and ₹158 for female graduates, for those who have passed the intermediate ₹205 and ₹132 respectively, for matriculates or those who have passed the Cambridge senior ₹170 and ₹103. etc. The rates for those recruited in Britain and possessing British qualifications are for M. A.s ₹700, for B. A.s ₹600 (men) and ₹300 (women), for intermediate B. A.s ₹450 (men) and ₹250 (women), etc.

The following passage is quoted from the report of the Inspector of European schools in the United Provinces :—

> "The heads of boys' secondary aided schools (only some eight of whom in all receive salaries at the market rate, the rest being either members of some teaching order or maintained from Mission funds of one kind or another) range from about ₹200 per mensem to ₹800 per mensem, or over, and average something like ₹400 per mensem, perhaps a little more; trained assistant masters who are under-graduates usually get at least ₹100 per mensem and many of them get as much as ₹150 and in some cases up to ₹200 per mensem with, in practically every case, board and lodging in addition; graduate assistant masters get usually ₹200 to ₹300 with an average of perhaps abou' ₹230 per mensem, also with board and lodging; untrained assistant masters get something less; trained assistant mistresses (under-graduates) range from ₹60 to ₹120 or thereabouts with an average of perhaps ₹85 or possibly a little more for plains schools, while trained graduate assistant mistresses usually get about ₹150 per mensem; untrained lady teachers are seldom paid more than ₹50 per mensem and the less competent and experienced may get as little as ₹25 per mensem, though board and lodging would usually be given in addition. The above salaries are usually considered fairly adequate for single teachers, but hardly permit a master to marry, though it may be noted that more than a few are married at schools where there are housing facilities or where better salaries are paid. Salaries are tending decidedly upwards, particularly for masters who are very scarce and have to be paid well to be secured at all."

It has to be borne in mind that some European schools provide their teachers with board and lodging.

475. The establishment of pension or provident funds would add greatly to the attractions of the service. In the Punjab a provident fund was established in 1913 under which teachers in aided schools contribute $6\frac{1}{4}$ per cent of their salary, the school authorities and Government each adding $3\frac{1}{8}$ per cent. It has proved popular and over two-thirds of the teachers who are

eligible have joined it. In Bengal six of the largest institutions have established their own provident or pension funds. The question has been discussed of utilising the Laidlaw fund (see paragraph 449) for the institution of pensions in Protestant schools; but no decision has yet been reached. Good progress has been made in the United Provinces, where 15 schools now participate in a fund to which the teachers contribute 10 per cent. of their salaries and government gives a like amount.

476. As already stated, there are only two colleges for the training of European teachers—the class at Sanawar for men and St. Bede's College at Simla for women. The former is maintained by the Government of the Punjab in connection with the Lawrence Military School at Sanawar. It receives students from all over India; and the Government of India give ₹10,000 a year to assist in meeting its cost. At the commencement of the war there were 20 students. But the master in charge and ten of his students proceeded to East Africa with a machine-gun detachment and the number of students is now only thirteen. St. Bede's College, maintained by a Roman Catholic Order with the help of a Government grant, continues to do good work and contains 38 students. The scheme for a second men's college at Ootacamund has already been mentioned. *Training of teachers.*

There are also eight training classes for women. They contain 125 students and cost ₹60,183 a year. The cost per student (about ₹481) is reasonably low, considering that an effective training is ordinarily imparted, with the result that the methods employed in many European schools, especially with infant classes, are now regarded as satisfactory. Prominent among these is the training class at the Dow Hill School at Kurseong near Darjeeling. It gives a two years' course of study to 20 girls. The admission qualification is a pass in the Cambridge senior local. This is admittedly too low, and attempts are being made with some success to secure girls who have passed the higher local. During the first year the students read the English section of the higher local (if they have not yet passed it), and devote the rest of their time to method study, observation of lessons, etc. Practice in teaching is reserved for the second year. Some students have now begun to devote their whole time to the study of kindergarten methods. The Director regards the reorganisation of the institution as necessary and the Cambridge higher school certificate as the proper qualification for entrance in the case of elementary teachers and the same certificate combined with the Cambridge higher local or else a university degree for secondary teachers. In Bombay there are three normal classes for women. Some intending teachers take up the secondary teachers' certificate examination, which however, being intended for masters in schools for Indians, is not altogether suitable. In Burma there are no separate schools or courses for European teachers. Candidates take the ordinary Anglo-vernacular courses.

As to training in special subjects, the centre established in Madras for domestic economy, manual work, physical training and singing has already been mentioned (see paragraph 467). A class in drill and gymnastics for women-teachers has been opened in Calcutta; and it is proposed to open domestic science training at the Dow Hill School, which possesses a highly qualified teacher and equipment for this subject.

The conference was in favour of a training college which should do for southern India and Burma what is done for northern India at Sanawar. (The conference also considered that such an institution might gradually be expanded, by the addition of an arts department, into a separate university college.) It was thought that Bangalore would provide a suitable situation, but certain difficulties have now led government to fix upon Ootacamund. The war has held up the project; but the Government of India have allotted ₹25,000 for the commencement of the building.

477. In the Code of 1905 the Government of India adopted a system of attendance grants as the central feature of the grant-in-aid system. Each child in regular attendance earns for the school a grant which varies according as the child is enrolled in the infant class, the primary section, the middle or the high. The full grant however is given only for the first ten children in the infant class and for the first twenty in higher sections. For the second *Grant-in-aid system.*

and third batch of a like number the rate is reduced. Thus, the usual rates for the infant class are ₹20 for the first batch, ₹15 for the second and ₹10 for the third; for the primary section ₹25, ₹20 and ₹15; for the middle section ₹40, ₹30, and ₹20; and for the high ₹120, ₹90 and ₹50. These sums represent annual grants. In the Punjab a decreased rate is given in the high and an increased rate in the lower sections.

Bombay and Burma follow a different system. In Bombay the grant admissible is one-third of the expenditure and a supplementary grant may be added, equal to one-third of this ordinary grant. In Burma the difference between income and expenditure is given under limited conditions, *plus* a salary grant; or a fixed grant is permissible.

In addition to these main or ordinary grants, supplementary grants can be given when the ordinary grant is insufficient. (This rule applies to all provinces save Burma.) The ordinary and supplementary grants may be combined and transformed into a fixed grant. Boarding grants of ₹8 a month are given for orphans and destitute children. Cadet grants of ₹6 a year for each efficient and ₹8 for each extra-efficient were given until the volunteer force was superseded by the Indian Defence Force. Special grants are given for night schools or to institutions situated where the European population is sparse. Salary grants, rejected by the Government of India when the code was framed, are nevertheless allowed in Burma, the United Provinces and the Punjab. Building grants may be of one-half or, in special cases, two-thirds of the cost of the scheme.

478. The grant-in-aid system is of particular importance in the case of European schools, most of which are of the aided type. It was discussed at the conference of 1912 and the main point in the resolution then passed on the subject was the desire exhibited for a fixed grant calculated with reference to income and expenditure in such a way as to enable the school to work efficiently. Other criticisms are from time to time made on the system. The arrangement whereby the rate of capitation sinks with the number of children is said to react hardly on the larger schools and to encourage the growth of small schools. The boarding grant is in practice open to abuse and the rate is often too low. Thirdly, no grant is permitted for indigent children who come as day-pupils.

The conference had proposed, among other things, that grants-in-aid should be of definite sums representing the difference between the income of the school and the expenditure necessary for efficient working. This proposal has not received any general support. But some of the local Governments proposed modifications making for simplicity and more generous treatment. That of Bombay would raise the salary grant to one-half or in special cases two-thirds of the salary and would increase boarding grants for orphans and destitute children to ₹12 a head, at the same time raising the age-limit. The Government of Bengal would abolish the limit of 50 per cent. in the case of building grants. The Government of India have not objected to these proposals. Other changes made in the quinquennium are the introduction of salary grants in Bihar and Orissa, and a complete change of system in the Central Provinces, where half the approved expenditure is now allowed as grant. But more important than any changes of system is the fact that provincial grants for the direct maintenance of institutions have risen from an annual sum of ₹10,57,371 to ₹17,73,185, and that the sum spent from this source as aid for the erection of buildings and the purchase of equipment has totalled ₹38,29,557 during the quinquennium. A considerable number of new buildings have been erected, especially in Burma.

V.—General results.

Results.

479. The results of the quinquennium are decidedly satisfactory. The number of those under instruction has substantially risen. The proposal for a training college in Southern India and the movement in favour of collegiate education manifested in the starting of the Allahabad hostel are particularly encouraging. The instruction given is generally sound and anyone conversant with these schools will be struck by the general neatness and accuracy

of the work done. On the other hand the schools which are staffed by men have suffered owing to the transfer of many teachers to military service.

CHAPTER XVII.

EDUCATION OF MUHAMMADANS.

I.—General.

480. In the last review it was pointed out that the Muhammadan population of British India comprises 57,950,000 souls. It thus forms a large minority, differing from the rest of the community in religion, tradition, ideals, manners, the language of its sacred and classical literature and its attitude towards the prevailing educational system. Owing to certain difficulties which it encounters in that system it has fallen behind the Hindus in the matter of higher education. Though the majority of Muhammadans are educated in the ordinary schools and colleges it has been found necessary to adopt certain measures in order to encourage their patronage of those institutions. A considerable number also still prefer to frequent special schools which make a speciality of Islamic lore. *Special requirements of Muhammadans.*

II.—Figures of institutions and pupils.

481. The number of Muhammadans under instruction in all classes of institutions is 1,824,364 against 1,551,151 in 1912. Detailed figures are given in supplemental tables 188 to 192. This increase represents 17·6 per cent. against an increase of 15·8 per cent. in the case of all communities in India. The percentage of the Mussalman population to the whole population is 23·5; that of Mussalman pupils to the whole school population is 23·2. *Number of pupils.*

The number of boys under instruction is 1,539,703, the number of girls 284,661, representing increases of 15·1 and 33·5 per cent. respectively on the figures of 1912. In the previous quinquennium the increase had been equivalent to 27·3 per cent. for boys and to 75·2 per cent. for girls.

482. The following statement shows the position of Muhammadans in education in the different provinces. *Position in different provinces.*

	Percentage of Muhammadan population to total population.	Percentage of Muhammadan pupils to total of pupils of all classes in all institutions (public and private) in	
		1911-12	1916-17
Madras	6·6	11·4	11·1
Bombay	20·4	19·8	19·2
Bengal	52·7	42·2	45·0
United Provinces	14·1	18·9	18·2
Punjab	54·8	41·9	40·8
Burma	3·5	3·3	4·2
Bihar and Orissa	10·6	12·1	13·0
Central Provinces and Berar	4·1	9·3	9·2
Assam	28·1	24·6	23·8
North-West Frontier Province	92·8	70·5	70·9
Other Administrations*	43·2		20·3
India	23·5	22·9	23·2

Thus the percentage of Muhammadans under instruction may be said to equal the proportion of Muhammadans to the general population as a whole. Even where the advance has not been so rapid as in the case of other com-

* Bangalore not included.

munities this is not necessarily a reason for discouragement. The United Provinces report points out that Muhammadans had proportionately a larger number of children at school than others, and that, if the increase has not kept pace with that among Hindus, it is only because the latter community are more nearly approaching an equal position.

Number of pupils in different classes of institutions.

483. But it is essential further to analyse these figures, with reference to the distinction between public and private institutions and between institutions of different classes. A fundamental characteristic of Muhammadan education is that the teaching of the mosque must precede that of the school. Hence Muhammadan pupils are found in large numbers in private institutions, such as Koran schools, where little or nothing is taught save the repetition of texts in Arabic. Muhammadans number 230,836 out of a total of 644,638 of all creeds in private institutions.

Again, owing to the comparatively late age at which a Muhammadan boy ordinarily commences his regular schooling, the multiplicity of languages which he has to learn, the poverty of large sections of the community and the fact that it is only in recent years that the indifference or even repugnance of the Mussalmans to English education has been overcome, their numbers in the higher class of public institutions are markedly low. This is shown in the following statement.

Class of institution.	Number of Muhammadan pupils in		Percentage of increase or decrease.	Percentage of Muhammadan pupils to the total number of pupils of all creeds	
	1911-12.	1916-17.		1911-12.	1916-17.
Arts Colleges	3,095	4,921	+58·9	10·4	10·4
Professional Colleges	664	1,152	+73·5	10·0	10·0
Secondary Schools	133,527	172,392	+29·1	19·0	18·6
Middle Vernacular Schools	37,754	39,905	+ 5·7	17·0	15·3
Primary Schools	1,022,768	1,309,845	+28·1	20·5	22·5
Special Schools	119,190	65,313	−45·2	66·2	45·5
TOTALS	1,316,998	1,593,528	+20·9	21·5	22·1

Owing to the comparatively large number of Muhammadans in private institutions, the percentage upon the total of pupils in public institutions is slightly less than that upon the total of all institutions; but the percentage of increase is greater. The large actual increases in colleges and secondary schools are swamped in the percentage which these numbers bear to pupils of all creeds by the fact that pupils of other communities have increased even more rapidly. The decrease in the case of special schools is due to the transfer of a number of these institutions to the category of primary schools.

Literacy.

484. The literacy of the Muhammadans amount to 3·8 per cent. against 5·9 for all races in India. "The low position of the Muhammadans," says Sir E. Gait, "is due largely to the fact that they are found chiefly in the North-West of India, where all classes are backward in respect of education, and in Eastern Bengal, where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar they stand above or on equality with the Hindus, and the same is the case in Bombay excluding Sind."*

Expenditure.

485. It is impossible to calculate the expenditure on Muhammadan education, because the majority of Muhammadan pupils are educated, not in special institutions, but in the common schools. An estimate of the cost of special institutions is of course possible. Thus, in Madras their cost has risen from ₹4·84 lakhs to ₹8·20 lakhs, towards which public funds contribute

* Census of India, 1911, Vol. I, pt. 1, page 296.

₹5·59 lakhs. In Bihar and Orissa and the Central Provinces the total amounts so spent are ₹3,74,662 and ₹1,85,813 respectively. But any such calculation is apt to be misinterpreted. It conveys the impression that this is the sum total of expenditure on Muhammadans, whereas it is but a small fraction.

III.—Muhammadans in ordinary institutions.

Muhammadans in public institutions.

486. The number of Muhammadans in public institutions has risen from 1,316,998 to 1,593,528. Some of these institutions, however, are specially designed for Muhammadans and no estimate can be given of the number educated in the ordinary schools and colleges, though it is safe to say that these form the great majority. The difficulties which beset the Muhammadan pupil have already been enumerated. The manner in which some of these are met is described below.

Scholarships.

487. In order to enable the poorer sections of this community to bear the expenses of education, special scholarships and fee exemptions are given.

In *Madras*, Muhammadan scholarships amount to Rs. 10,450 a year. In addition, fees of Muhammadan pupils are calculated at half rates and managers are encouraged to admit such pupils by an addition to the grant of the amount of fee-income thus foregone. Some of the district boards and municipalities in *Bombay* give scholarships to induce pupils to complete the vernacular course and two special middle school scholarships are annually awarded in each district. Sind possesses a special system involving an annual expenditure of ₹20,000 from provincial funds on Muhammadan scholarships and forming an educational ladder on a small scale. A boy who has studied in a middle school may win a scholarship of ₹3 a month which carries him to the end of the fourth standard, after which another scholarship of ₹150 a year takes him to the end of the school course. Finally, endowments, local boards and the university provide college scholarships. In *Bengal*, out of 210 upper primary scholarships, 24 are reserved for Muhammadans and out of 210 middle scholarships 56 are so reserved. These carry a boy to the end of the school course. An important concession has been made in Bengal by the utilisation of the Mohsin fund for scholarships and stipends in colleges. In addition to special endowed scholarships for Muhammadans there are now the following college scholarships:—

Junior scholarships—
25 government scholarships of ₹10.
7 Mohsin scholarships of ₹8 and ₹10.
51 Mohsin stipends varying from ₹5 to ₹10.

Senior scholarships—
21 government scholarships of ₹10.
5 Mohsin scholarships of ₹14.
30 Mohsin stipends varying from ₹5 to ₹10.

Graduate scholarships—
2 government scholarships of ₹25, and a third of ₹30 open to backward classes also.
1 Mohsin scholarship of ₹25.

Engineering scholarships—
4 Mohsin stipends of ₹10.

Medical scholarships—
6 Mohsin stipends of ₹15.

A certain number of the free places in schools are also reserved for Muhammadans.

In the *Punjab* 30 out of 64 open college scholarships (₹10) are reserved for Muhammadans, and the Victoria scholarships (115 tenable in middle classes of the value of ₹4 and 29 in high schools of the value of ₹6) are open only to Muhammadans, who also participate in the ordinary school scholarships.

In *Bihar and Orissa* 4 junior college (₹7), 5 senior college (₹7 to ₹12) and one post-graduate scholarship are reserved. In the *Central Provinces* there are 25 middle and 25 high scholarships. In *Assam* the number specified in the report amounts to 7 primary scholarships of ₹3, three middle vernacular of ₹4 and two middle English of ₹4; there are also 25 college scholarships of ₹10.

It has to be remembered in connection with these scholarships that Muhammadans are also able to compete for ordinary scholarships.

Hostels

488. The Muhammadan population in some parts of India is largely rural and facilities for higher education are not always available to them. Moreover, the Muhammadan parent attaches importance to supervision and

religious exercises and instruction. Hence hostels are popular and a considerable number of these have been opened, especially in Bengal. During the period the Baker hostel, attached to the Calcutta Madrassa, has been extended, and a large hostel for college students erected by the university out of the imperial grant. In Assam the number of Muhammadan hostels has doubled.

Training.

489. In *Madras* the number of special training schools for Muhammadans rose from four to six (four for men and two for women) with 234 students; and there are five sessional schools. *Bombay* has an Urdu training class at Ahmedabad and offers facilities at the vernacular training colleges, which contains 182 Muhammadan stipend-holders. There are six schools in *Bengal*, called *Muallim*-training schools. In *Bihar and Orissa* the number of schools rose from seven to twelve, a class was opened for women, and arrangements were made for imparting instruction in Urdu to students of training and *guru*-training schools. The normal school for Muhammadans at Amraoti in the *Central Provinces* has not flourished owing to paucity of candidates with the requisite qualification of the middle vernacular standard; and the training class at Khandwa had to be closed, as it received little support.

These measures are concerned with primary education, where the condition of Muhammadan teachers as regards qualifications is not so bad. The Bombay Director observes that 70·7 per cent. of the Muhammadan primary teachers are trained, against 88·3 per cent. of Hindus. Nor is the actual number of Muhammadan teachers in such schools inadequate. It is in the secondary schools and colleges that the difficulty of obtaining teachers arises. The number of Muhammadans who have attained the necessary academic qualifications is comparatively small, and most of them can command better pay than the teaching profession offers, let alone the delay entailed in attending a training college. This state of things reacts on the popularity of schools in the eyes of the Muhammadan public; and complaints are often made that teachers of this community are not appointed. The fact is that it is impossible to secure them. The only effective remedy lies in the gradual increase of Muhammadan pupils in higher institutions and the consequent production of more Muhammadans qualified and willing to accept teaching posts.

Special inspectors.

490. Quite apart from the recognised desirability of attracting Muhammadans into the ordinary inspecting staff, most provinces possess special inspectors of Muhammadan schools, where a knowledge of Arabic, Persian and Urdu is required.

Madras has 11 such sub-assistant inspectors. Most districts in *Bombay* have a Muhammadan assistant deputy inspector whose duty it is to promote the education and safeguard the interests of his community. In *Bengal* the arrangement is more elaborate. There is an assistant Director of Public Instruction for Muhammadan education, the post being filled by an officer of the Indian educational service. There are also five assistant inspectors in the provincial service. In the *United Provinces* a special inspector for the province and a deputy inspector for each division were appointed during the quinquennium. *Burma* has three Muhammadan deputy inspectors. In *Bihar and Orissa* there are now five special inspectors, one in the provincial service and four in the subordinate service, as well as 10 inspecting *maulvis*. Three deputy inspectors look after Urdu schools in *Berar*. A Muhammadan assistant inspector in *Assam* supervises the Arabic, Persian and Urdu classes in high schools and the progress of the community in primary schools and *maktabs*.

The existence of such inspectors is of benefit to the Muhammadans in ordinary institutions as well as to those who study in the special schools described in the next section.

Muhammadan staff.

491. It has been observed that the paucity of Muhammadans on the staff of schools is a matter of complaint and the cause has been stated. The community naturally feels securer when it has a certain number of its members in government service. Again, the presence of Muhammadan teachers on the staff of a school, be it government, board or privately managed, gives confidence to Muhammadan parents. In Bengal efforts have been made to secure the presence of a Mussalman element (apart from the *maulvi*) in every school. The Director states however that the number has not increased during the quinquennium, though there has been an increase in the number of deputy and sub-inspectors. The reports of most of the Directors give details of

Muhammadan employment. But it is difficult to collate these or to compare them with past conditions. Two instances must suffice. In the Central Provinces only 4·7 per cent. of the population is Muhammadan. Yet Muhammadans there occupy two posts (one professorial and one inspecting) in the provincial educational service, three posts of deputy-inspector, and eight clerkships in educational offices. Moreover, out of 12,273 teachers in that province 979, or nearly 8 per cent., are Muhammadans. In Assam the Muhammadans are 28·1 per cent. of the population. The number of Muhammadan inspecting officers and teachers has risen from 688 to 913 and now forms over 12 per cent. of the 7,294 teachers, etc., engaged in education.

General encouragement.

492. Another trouble which Muhammadans feel is the fact that the higher institutions have generally been started and are mainly managed by non-Muslims. It is sometimes complained that Muhammadan pupils do not receive an equal measure of attention and consideration. The inclusion of Muhammadan representatives in the managing committees is one method of dealing with this difficulty and can be amicably arranged in aided schools at the time of revision of grants. In Bengal, where such problems are of special importance and it is sometimes alleged that Muhammadans are not freely admitted into schools, a rule has been made that 25 per cent. of the vacancies in government and aided colleges and a percentage fixed with regard to the needs of the locality in all government schools should be reserved for them; orders have issued to enable such pupils of government institutions to attend the mosque on Fridays and the appointment of *maulvis* is insisted upon in high schools. Nevertheless, Muhammadans exhibit a desire for starting their own schools under their own committees, with full facilities for religious instruction and observance on the spot.

IV.—Special institutions for Muhammadans.

Kinds of special institutions.

493. As remarked in the last review the special institutions for Muhammadans are of three kinds—(*i*) those which teach the ordinary course, (*ii*) those which, starting as indigenous schools, have adopted a modified version of the prescribed curriculum and thus gained recognition, (*iii*) those which, whether recognised or not, have a scheme of study peculiar to themselves.

(*i*) *Ordinary institutions designed for Muhammadans.*

494. Institutions falling within the first class are really ordinary institutions started by Muhammadans. Hindus are not necessarily excluded from them. But arrangements are made for the teaching of Arabic, Persian and Urdu, religious instruction is imparted and Muhammadan teachers are employed as far as possible.

(*a*) *Colleges.*

495. There are three colleges. The famous Muhammadan Anglo-Oriental College at Aligarh, founded by Sir Syed Ahmad, now contains 803 students. The proposal to transform it into a Muslim University was largely in abeyance during the quinquennium, but has been recently revived. The Islamia College at Lahore has now over 500 students and, with the assistance of an annual imperial grant of ₹30,000 (given for three years) has made great progress. The Islamia College at Peshawar is one of the most interesting educational institutions in India. The Muhammadans of the North-West Frontier Province voluntarily subscribed eight lakhs and the Government of India added ₹50,000 recurring and ₹3,37,280 non-recurring. The site is not far from the entry to the Khyber Pass and affords ample room for play-fields. The buildings, commenced at the close of 1912, include a large hall, a science block, hostels and professors' houses. The college was opened in 1913 and already contains over 100 students, while the collegiate school, which began with 25 boys, now has 300. The college is a remarkable signal of peace planted among the turbulent elements of the frontier. It attracts pupils not only from the province, but from the agencies and the trans-frontier tribes—Afridis, Waziris, Mahsuds, Chitralis, etc. Owing to the increasing demand for college education among Muhammadans in Bengal, there are proposals for special colleges in the projected university at Dacca and in Calcutta.

(*b*) *Schools.*

496. Muhammadan schools are found in most of the provinces. In *Madras* the number of secondary schools has risen from four to six and includes the admirable Madrassa-i-Azam. There are also special primary schools.

The efforts made among the backward Mappillas of the west coast have resulted in an increase of 112 schools and 13,664 pupils. *Bombay* has four *madrassas*, the most famous of which is the Sind Madrassa at Karachi, several secondary and a number of Urdu primary schools. In *Bengal* there are a few Muslim high schools and the so-called middle *madrassas* which were founded by the Government of Eastern Bengal and Assam and which are really middle English schools sometimes with separate Arabic departments. But the principal feature of Bengal is the large *madrassas*, a description of which is to be found under the third class of special institutions. In addition to the distinctive Arabic departments, the Calcutta, Dacca and Chittagong *Madrassas* have Anglo-Persian sides, which are in effect high schools recognised by the university. The *Punjab*, characterised as it is by denominational institutions, has a number of Muhammadan high schools. In *Burma*, Anglo-vernacular schools for Muhammadans have increased from three to five, vernacular schools from 118 to 189, and the number of their pupils has risen from 5,254 to 8,772. The *Central Provinces* has several Muhammadan high schools, three of which were provided with new buildings during the quinquennium; there are also primary Urdu schools. The Anglo-Arabic high school at *Delhi* is largely maintained by trust funds bequeathed by the Nawab Itmad-ud-daula in 1829 and has received considerable imperial grants; there are also ten primary schools.

(ii) Indigenous schools with a secular course.

497. Under the second class fall those indigenous institutions, *maktabs*, *mulla* schools and *Koran* schools, which have adopted all or part of the ordinary primary course, without necessarily dropping their Islamic characteristics. Their number and the expenditure on them are shown in appendix XI. This table differentiates between those which teach part at least of the usual secular course and are now recognised and classed in the general tables as primary schools, those which teach no part of the primary course but are recognised or teach a recognised course or present pupils at a recognised examination and which are classed in the general tables as special schools (under the sub-head 'other schools'), and those which neither are recognised nor teach any part of the primary course and which are classed in the general tables as private institutions. The value of the table is that it enables the reader to ascertain how many of the schools and pupils classed in the general tables as primary or special are denominational institutions originally of an indigenous type, and the expenditure which is incurred upon them. The schools treated of in this paragraph are those enumerated in the first column of figures in that table. It will be seen that there are 9,675 such schools, with 310,444 pupils, that their total cost is ₹10,21,750 and that ₹5,38,147 is met from public funds. These figures represent considerable increases over those of the previous year.

The principal field for such institutions is Bengal, where there are 6,548 secularised *maktabs* with 203,082 pupils. In the western divisions the system followed in dealing with them was started in 1908; a grant is given amounting, for the first or lowest class, to half that which would be earned by a lower primary school, in the second class to the full amount, in the third and fourth classes on a scale 25 and 50 per cent. higher respectively. In the eastern divisions, where, owing to the great Muhammadan population, special schools of this type demand less encouragement, the system and the course are different. The whole question was considered by the Muhammadan advisory committee in 1914 and is still under discussion pending the preparation of a syllabus for ordinary primary schools. Another large development along this line has been among the *mulla* schools of Sind. Doubts arose during the quinquennium about their efficiency. In one district a special Muhammadan deputy inspector was appointed to look after them. The divisional inspector considers that this had a good effect upon the quality as well as the number of the schools, and that the type is capable of expansion and improvement. Such *mulla* schools inclusive of those in Aden number 557 and their pupils 15,160. Though the fee income is insufficient, they are well supported by subscriptions, etc. *Maktabs* are popular in the United Provinces, and a special curriculum was framed for them during the quinquennium. Schools of a similar type are numerous in the Punjab—1,129 with 46,003

pupils. Other provinces too possess them, but in smaller numbers. In Assam an attempt is being made to convert indigenous Muhammadan schools with a secular course into secular schools with an Islamic course as more likely to fit pupils for employment.

498. Institutions of the third class, so far as they are public, are those to which the second column of figures in appendix XI refers, while the third column shows the number of private schools. These institutions vary from the primitive Koran school, held in the shade of the mosque and often of no educative value, to the great *madrassas* where the religion and laws of Islam are expounded by *maulvis* who have devoted their life to that study. Among public institutions are the Calcutta Madrassa, founded by Warren Hastings, the *madrassas* at Dacca, Chittagong and Hooghly, and the Sind Madrassa. The administration of Assam recently opened a senior *madrassa* at Sylhet. Two changes of importance have taken place in Bengal. The full responsibility for the maintenance of those *madrassas* which previously benefited from the Mohsin fund (an endowment made by Haji Muhammad Mohsin, the pious son of a rich Persian merchant settled at Hooghly) was assumed by government, and the income of the fund was released for scholarships and stipends for Muhammadan institutions. Second, a scheme of studies has been introduced, called the reformed *madrassa* scheme, superseding that which was sanctioned after a conference in Calcutta in 1908. The Muhammadans of Eastern Bengal were dissatisfied with the 1908 scheme, which did not, in their opinion, meet modern requirements. A committee was accordingly summoned at Dacca in 1909-10, which drew up a syllabus of a more advanced type, including English. While this was under consideration, the Dacca University Committee took up the question of Islamic studies not only in the university itself but also in the *madrassas* which would prepare pupils for that faculty. The curriculum then drawn up was brought into operation in 1915. It includes the recitation of the Koran, Arabic, Urdu, arithmetic, geography, history, English, drawing, handwork, drill and vernaculars (Urdu and Bengali). Save that Arabic and Urdu are compulsory, this course corresponds approximately to that pursued in ordinary secondary schools and will vitally change the character of the *madrassas*. The Calcutta *madrassa* will continue to teach the old orthodox course either with or without English as an optional subject.

(iii) Schools of special studies.

V.—General results.

499. The general result has been an increase in the number of Muhammadan pupils slightly larger, in proportion to the number of the community, than the increase among pupils of all races and creeds together. Almost more marked than this increase is the growing tendency among Muhammadans to resort to institutions where education on modern lines is imparted. True, the number of Mussalmans in private institutions (mainly Koran schools) still slightly rises, while that of Hindus has declined. But the increase of pupils in public institutions has been most marked. This does not necessarily indicate that the Muhammadans are deserting the traditions of Islam. They continue insistent on religious instruction and observance. But the old prejudice against modern forms of thought and the exclusive adherence to the orthodox subjects, which still lingered to a greater or less extent in various sections of the community, are dying away. Views are broadening. It is seen that instruction in special schools is often inferior—if only because the staff is inferior. As I stated in the last review, the problem that now faces the Muhammadans is the maintenance of religious observance and discipline amid the disintegrating influences of higher secular education. So far the signs do not show that there has been weakening in these essentials. The special school that teaches unnecessary or useless subjects is waning in popularity. The cry is still for special institutions, but of the type that will fit the Mussalman for the developments of modern life, while yet keeping him essentially a Mussalman.

Change of outlook.

CHAPTER XVIII.

EDUCATION OF BACKWARD AND SPECIAL CLASSES.

I.—General.

500. In the last review I wrote as follows.

Description of these classes.

"It is a commonplace to say that India presents a greater diversity of races than does Europe. Successive waves of conquest have broken over the continent. Throughout the peninsula is found the Dravidian stock, on which have been superimposed, more or less strongly, the characteristics of surrounding or invading nations. The Aryans have driven a wedge from the north, through Kashmir, the Punjab and Rajputana; their physical type is mixed with the Dravidian in the United Provinces; their language forms a component of the vernaculars as far south as Goa on the west coast and Puri on the east. Invaders (perhaps alpine) have tinged the race-type along the west coast from Sind through the Mahratta country nearly to Travancore; the Mongoloid type has permeated through Bengal. Beyond the peninsula are other races—Turko-Iranian in Baluchistan and the North-West Frontier Province, Mongoloid in Nepal, Assam and Burma. Combined with differing racial and linguistic characteristics there is the system of caste. It is natural that in such an agglomeration there should be found communities that require exceptional measures—aboriginals, 'fragments of forgotten peoples,' classes whose social status or language isolates them from a common system, or wild border tribes hardly touched by civilising influences. These races or castes require special treatment; and it has been the policy of government to accord it."

An attempt is made in the present chapter to deal with the education of (*i*) aboriginal and hill and forest tribes, (*ii*) depressed classes, (*iii*) criminal tribes and (*iv*) communities which present special problems. Some of those which fall into the last category cannot be described either as depressed or as backward; but it is difficult to deal with them in any other chapter.

Figures.

501. The treatment of this subject in previous reviews was difficult because of the indefiniteness of the denotation of the terms used. It is impossible wholly to remove this difficulty. But the question is of such importance that local Governments were asked to state the tribes, castes, etc., included under each of these categories. Directors were requested to give similar information and to show the total numbers of aboriginals, depressed classes and criminal tribes under instruction. Finally, a new table (V A in volume II) was made which includes a column for the number of the depressed classes in various stages of education. As was natural, complete uniformity has not been attained at the first attempt. On the whole however a fair approximation has been reached, which should afford a useful basis for future action. In appendix XIII a list of the tribes, castes, etc., together with their numbers, is given for each province, grouped according to the three first classes; and the number of children at school is also shown for each of those classes. The main figures are reproduced below, Burma, the North-West Frontier Province and the minor administrations being omitted. The hill tribes of the Punjab, Burma and the North-West Frontier Province cannot be classed under the category of aboriginals. There are, properly speaking, no depressed classes in Burma (save for pagoda-servants and grave-diggers) or in the North-West Frontier Province.

	ABORIGINALS.			DEPRESSED CLASSES.			CRIMINAL TRIBES.		
	Population.	No. at school.	Percentage at school.	Population	No. at school.	Percentage at school.	Population.	No. at school.	Percentage at school.
Madras	758,191	4,607	0·61	5,686,342	120,607	2·13	535,227	14,351	2·68
Bombay	1,162,604	19,558	1·68	1,635,896	30,568	1·87	1,178,682	1,348	0·11
Bengal	230,887	5,025	2·18	6,742,913	80,952	1·20	80,769	50	0·06
United Provinces . .	596,272	3,121	0·52	8,374,542	10,924	0·13	2,159,176	3,286	0·15

	Aboriginals.			Depressed classes.			Criminal tribes.		
	Population.	No. at school.	Percentage at school.	Population.	No. at school.	Percentage at school.	Population.	No. at school.	Percentage at school.
Punjab	..	..	..	2,107,293	6,906	0·33	31,858	76	0·24
Bihar and Orissa . .	3,674,442	55,258	1·50	1,236,300	19,841	1·60	9,581	5	0·05
Central Provinces and Berar.	2,731,737	26,961	0·95	3,012,389	26,668	0·89	256,877	58	0·02
Assam*	812,802	19,986	2·45	2,701,144	32,088	1·18	..	..	..
India†	9,966,935	134,516	1·34	31,502,819	528,554	1·04	4,252,170	19,174	·45

The figures clearly show the comparatively advanced condition of the eastern group of aboriginals mentioned in the next paragraph. The progress made among the Panchamas of Madras, too, is clearly indicated.

II.—Aboriginals.

502. The aboriginals fall into two main classes—the Dravidian and what may be conveniently termed the Mongoloid. The former are found in practically all provinces save the Punjab, Burma and the North-West Frontier Province. They include Gonds, Kols, Korkus, Khonds, Savaras, Oraons, Mundas, Hos, Santals and others. These for the most part are rude and unintelligent peoples, who were driven back by invaders into infertile hills and still live in primitive conditions. This however is not the case with the more easterly tribes, such as Hos and Santals, who are more advanced and often exhibit considerable intelligence. The Mongoloid tribes are found in Assam and the eastern parts of Bengal. Their conditions are more civilised than those of the Dravidians; indeed, the Khasis of Assam are, at least in point of numbers, among the most educated communities in India. Possessed of considerable intelligence and often skilful cultivators, these tribes are among the most prosperous of the rural communities in India, though some of them, such as the head-taking Nagas, still exhibit considerable fierceness. In addition to the Khasis and Nagas, this division includes Bhutias, Lushais, Garos, Meghs, Tiparas, Kacharis, Meches, Rabhas and many others. *Classes of aboriginals.*

503. The difficulties connected with the education of many of these tribes are their shyness, their dislike of organised activity and their language. The first may be partly met by the appointment of special inspectors of the same race (see paragraph 515) and the training of tribal teachers. Good results are achieved by mission agencies, since these can settle down on the spot, win the confidence of the people and learn their tongue. Much valuable work has been done by missionaries in founding schools and in reducing to writing languages which have no script of their own. Sometimes too the departments publish school-works in the tribal dialects; *e.g.*, in Bihar and Orissa, Mundari, Santali and Kui readers were thus produced during the quinquennium. Sometimes the Roman script is used in such works; sometimes one of the Indian scripts, especially Nagri, is adopted. But the difficulty does not end here. The aboriginal languages are often used by so small a population that for general purposes of intercourse they are valueless. Hence it may be necessary to teach a pupil some more widely understood vernacular in addition to his own tongue. The case of the Kachar hills has already been mentioned, where after various languages had been tried without success English was finally introduced. Sometimes of course the tribal tongue is moribund or the tribe has become bi-lingual. In such case the problem is simplified and it is necessary to teach only the second language which the aboriginals have adopted. On the other hand a few tribal languages are developing. Thus Khasi, a language of the group previously described as Mon-Khmer and originally unwritten, has been reduced to the Roman script, boasts two newspapers and is recognised as a vernacular for the matriculation and inter- *Difficulty of dealing with them.*

* The Assam figures for depressed classes include a certain number of aboriginal tribes resident on the plains.

† The figures do not precisely correspond with those shown in general Table VA, since some aboriginal races are there classed as depressed. Moreover minor administrations are not included in this detailed table, the compilation of which has been attended by considerable difficulty, nor would these figures make any large difference.

mediate examinations of the University of Calcutta. Garo and Lushai are also recognised for translation purposes.

Measures adopted.

504. The following is a brief account of the measures adopted for dealing with aboriginals.

Madras has 213 schools for aboriginals. In *Bombay* there are special boarding schools, staffed where possible with aboriginal teachers. There are also other schools, *e.g.*, 32 in the Thana district. The inspector in that locality says that there is no increase in the district, that though the tribes are less lawless than formerly the aboriginal teachers cannot exert much more influence on the people, and that the time has come to bring in more capable teachers from advanced classes. In *Bengal* some of the district boards aid schools and the missions maintain others. Thus, in Mymensingh, there are 11 schools of the Australian Baptist Mission, and 30 schools are aided by the board, for Garos, Hadis, Hajangs and Koches. Government maintains schools for Chakmas, Tiparas and Meghs, including a large hostel, with free board, and a training class, at the Rangamati high school, a middle English school at Ramu for Arakanese, etc. There are also schools for Mundas, Bhutias and Lepchas. Large areas in *Bihar and Orissa* are practically populated by aboriginals, so that, apart from the special measures mentioned in paragraph 510, it is needless to give any description of the extensive mission and other activities and impossible to state the total cost. The indirect expenditure, including that on training schools, is ₹39,848. A great work is carried on in *Assam*, largely through mission agency. In the Khasi and Jaintia hills the most important agency is the Welsh Calvinistic Methodist Mission, which receives ₹15,000 a year from government; others are the Roman Catholic, Church of England, Unitarian and Brahmo Samaj Missions. Government maintains a high school and an industrial school. In those hills there are 445 schools with 11,220 pupils involving an expenditure of ₹1,38,255, to which the missions contribute ₹1,19,701. In the Garo hills the task is shared between government and the American Baptist Mission. The former maintains 82 schools, the latter 84, nearly all of which receive State aid. The number of pupils has increased and is now 5,170. In the Naga hills the language difficulty is acute—in addition to the 27 dialects or languages of the tribes, Assamese and English are considered necessary subjects. The total number of schools is 39, and the number of pupils in the primary schools, though it is small and though the people do not take kindly to education, has doubled in the period. Their management is partly under government, which also maintains an industrial school, partly under the American Baptist Mission Society, including that of two so-called training schools. There are 62 schools with 1,636 pupils in the Lushai hills, practically all under the Welsh Calvinistic Methodist and London Baptist Missions. The head missionaries are honorary inspectors of schools and receive grants for their work. Instruction is given in carpentry and first aid. Further, instruction is imparted once a week in 73 villages to 1,980 pupils. In the Kachar hills education has not flourished; the population is a mixture of divers tribes and there is the language difficulty. There are 12 primary schools on the North-East Frontier.

III.—Depressed Classes.

Classes of depressed communities.

505. The depressed classes, like the tribes just described, are often the original inhabitants. But they differ from the hill tribes in having preferred a life of servitude to exile into inhospitable regions. Thus they have lost their distinctive habits and languages and have become a recognised part of the general community. The rules of caste (probably invented and developed for this very end) have however kept them distinct from the invaders and the tasks assigned them are menial and regarded as degrading. They form the unclean castes, whose touch or even whose shadow is pollution. But a wider significance is often attached to the expression, so that it includes communities which, though not absolutely outside the pale of caste, are backward and generally poor and despised and also certain classes of Muhammadans. Some have interpreted it simply as educationally backward. The task of definition is made difficult by doubt as to where the line should be drawn and the elastic condition of such classes as dwell on the borderland of respectability. Sometimes a whole community declares itself to be depressed with a view to reaping special concessions of education or appointment. Sometimes a caste or a sub-caste, hitherto regarded by all as depressed, totally repudiates the description and declares itself as good as its neighbours. On the whole the tendency is for the lower castes to edge themselves here and there into a higher scale by the assumption of new names and privileges. Further complicating facts are that many of these down-trodden castes come into the fold of Christianity and that a caste reckoned as untouchable or depressed in one locality is not necessarily so in another.

506. The education of the depressed classes is carried on partly in special government schools, partly by Christian missionaries, partly by Indian missions and partly in the common schools. The difficulties in the first three classes of institutions are the unreadiness of teachers of better caste to take up the work and the paucity of qualified teachers among the depressed. The difficulty in the last is the prejudice felt against the admission of unclean castes. This last trouble is intensified where schools are held in temples or rented private houses. Difficulties common to all are the total lack of any tradition of education among classes who have always regarded themselves as excluded from its advantages and bound to certain tasks of their own, the poverty of many, which leads to the employment of child labour and to an insufficient diet, and the opposition of a conservative element jealous of the privileges which it has always regarded as its exclusive property. *Difficulty of dealing with them.*

507. The following description of what is being done in different provinces will show how attempts are made to solve these difficulties. *Measures adopted.*

The problem is of special importance in *Madras*, where the Parayars, Pallas, Malas, Madigas, Holyas and others form the great class known as Panchamas. Missionaries, both Roman Catholic and Protestant, have been very active among this class and have gained many converts. The number of departmental schools has increased and the Hindu community, as represented in the Depressed Classes Mission, is evincing greater interest in these classes. The number of Panchama children at school has risen from 72,190 to 120,607. The total expenditure on special schools has risen from ₹6·08 lakhs to ₹8·74 lakhs, to which Government contributes ₹4·8 lakhs. In *Bombay* there are 576 special schools and classes, of which 211 are maintained by local boards, 85 by municipalities and 280 by private agencies. These last are conducted mainly by Christian Missions, but also by the Depressed Classes Mission Society of Poona and Bombay, aided by State grants. The number of pupils has risen from 26,204 to 30,568. It is reported that there is no great difficulty about the admission of the lowest castes to primary schools in *Bengal*. Nevertheless, where these are settled in large numbers, Government opens special schools for them. Among Indian societies the Bengal Social Service League and the Society for the Improvement of the Backward Classes, Bengal and Assam, have opened 19 and 62 schools respectively. In the *United Provinces* boards have recently been required to open special schools without fees for backward or depressed classes when there is a demand. The report enumerates the efforts made in this direction but admits that the results are as yet deplorably small. The *Punjab* report mentions 44 special schools with 1,022 pupils and the table shows 3,491 pupils under instruction in all kinds of schools. The movement for the education of low-caste children is gaining strength, chiefly through the exertions of Christian Missions and the Arya Samaj. In *Bihar and Orissa* there are 41 special schools, and ₹7,590 was spent on these and other special measures. There are 42 special schools in the *Central Provinces*, of which more than half are maintained by missionaries. But this policy has received little encouragement, as the administration consistently maintains the principle that boys cannot be excluded from the common schools on grounds of caste prejudice—a principle which the institution of special schools would seem to weaken. The effects of such prejudice are gradually disappearing and low-caste boys are less often than previously deterred from joining schools for fear of degrading treatment. In *Delhi* there are 16 mission schools and one Municipal school.

Of course the pupils are mainly in the primary stages. But there are exceptions, as in the case of the Namasudras cited in paragraph **516**.

IV.—Criminal Tribes.

508. It may seem preposterous to talk of criminal tribes in the twentieth century. But it has to be remembered that it is only a century since the great Pindari bands of robber-mercenaries were scattered and that their suppression involved a concentration of all India's military resources. During the years 1829-35 the murderous Thugs were suppressed. It is characteristic of India that each class has its task allotted to it; and the caste system has already prepared a cut-and-dried scheme of life for the new-born infant. Hence it seems natural that the son of a thief should follow his father's profession; and, though the police keep an eye on them, there cannot be any particular detestation of tribes whose recognised work and sometimes even designation are those of the pickpocket. *Measures adopted for educating criminal tribes.*

Criminal settlements, where education is arranged for the children, have been established in *Madras*; and many of the Kallars, whose hereditary occupations are dacoity, blackmail and cattle-lifting, are now taking to lives of honesty. Similar

settlements have been made at six places in the *Bombay* presidency, where such tribes are particularly numerous, with nine special schools attended by 1,348 pupils. Several district boards have opened schools in the *Punjab* for the children of criminal tribes. In *Bihar and Orissa* these tribes are very small in number and only five pupils are known to be at school. Systematic efforts have not yet been made in the *Central Provinces.*

The most successful agency for dealing with such tribes in various parts of India is the Salvation Army. Aided by the great experience possessed by Commissioner Booth-Tucker, it has established settlements and is imparting sound industrial training.

V.—Special classes.

Other special classes.

509. Special classes (for the most part isolated communities or those which differ in origin or habits from the surrounding population) are not necessarily backward at all. There is a tendency on the part of communities such as the Sikhs or the Buddhists to request information about the education of their co-religionists. The Sikhs, however, form a solid body 2,093,804 strong in the Punjab; and there are 63,029 at school in that province. Buddhists form the great bulk of the population of Burma and only a minute percentage of the population of upper or southern India. A class which can better claim to be special in the sense here given is found in the Jains, who number 1,248,182 and of whom 28,129 are at school in those provinces whence reports of their numbers have been received.*

But Burma, with its curiously broken population, is the home of such peoples. They are in no sense aboriginal, save perhaps the Talaings and the Wa-Palaungs; rather they represent successive waves of partial invasion. The most numerous are the Karens, a rather mysterious race who appear to have come from the highlands of Western China. These number 1,102,695. There are on the aided list 13 Anglo-vernacular and 1,165 vernacular Karen schools; with 2,822 and 32,047 pupils respectively. This represents an increase of pupils by 25 per cent. In the Shan States there is a special school for chiefs and an elementary training class has recently been opened. Vernacular schools have increased from 89 to 169 and their pupils from 2,999 to 5,730. There is also an Anglo-vernacular mission school for Shans at Bhamo with 180 pupils. Chin schools have increased from 19 to 43 and attendance from 710 to 1,706; Kachin schools from 13 to 19 and their pupils from 392 to 660; Talaing schools from 39 to 91 and their pupils from 1,601 to 3,398. Increases are also noticed among Taungthu, Daru, Lahu and Lawa schools. In 1916 there were 2,570 schools for these tribes, with 62,584 pupils. The total of such pupils in all classes of schools (special or ordinary) was 77,277. Burma also receives a considerable number of immigrants from India and China, for whom there are special schools. The pupils in Tamil and Telugu Anglo-vernacular schools have increased; and there are Punjabi, Bengali and Gujarati schools. There are three special Anglo-vernacular schools for Chinese.

VI.—Special measures.

Special measures.

510. The special measures adopted for bringing aboriginals and the depressed classes to school are (*a*) scholarships and fee exemptions, (*b*) the special hostel system, (*c*) instruction in industries, (*d*) special training facilities and (*e*) special inspection.

(a) Scholarships, etc.

511. Generally speaking, these classes read free and are encouraged by scholarships and rewards. In Bombay books and slates are supplied free of charge and clothing is distributed after the examinations. In Bihar and Orissa scholarships are offered, including college scholarships, and two scholarships in the Kalimpong lace school, four for arboriculture and one for the veterinary college. In the Central Provinces and Assam 30 and 37 scholarships respectively are reserved for aboriginals and depressed classes; five of the former and 21 of the latter are college scholarships.

(b) Hostels.

512. In Bombay ten boarding schools have been established, to which promising boys of aboriginal tribes are attracted by allowances, clothes, etc. These also train vernacular teachers and appear to be very successful. This system is a special feature of Bombay but is found to some extent in other provinces also. Missions maintain such boarding schools at suitable centres in the hill-tracts.

* The numbers were not reported from the United Provinces or Ajmer-Merwara.

513. Weaving, carpentry and sericulture are taught at Mangalore for backward classes. The Depressed Classes Mission has three industrial schools in Bombay. Hand-loom weaving is also taught in Bombay and other forms of industrial training are contemplated. Assam has industrial schools for Khasis, Nagas and Meches. Apprentice scholarships, tenable in various parts of India, were awarded to Lushai boys in 1914; the result is said to be satisfactory. (*c*) *Industrial Classes.*

514. Madras has a sessional school and a temporary training class for aboriginals. In Bombay such training is given in the special boarding schools and also in the ordinary training colleges for vernacular teachers. There is a training class in the Chittagong Hill Tracts for Chakmas and Tiparas and there are also training schools for Santals. Bihar and Orissa has three government and three mission training schools for men, and the seven mission training schools for women are chiefly for aboriginals. In the Central Provinces 50 stipends of ₹9 are annually reserved for aboriginals and depressed classes. There is a training school for Garos in Assam, two training schools in the Khasi and Jaintia Hills and two in the Naga Hills. It is indicative of the difficulties encountered in this branch of education that the training school for Garos had to remain closed for one year in order to allow the Bengali headmaster to learn the language. (*d*) *Training.*

515. The appointment of inspecting officers for aboriginal schools is of importance. Three such have been appointed for Santal schools in Bengal. In Bihar and Orissa there is a special staff of 15 sub-inspectors for hill tracts, to which only aboriginals can be appointed. (*e*) *Inspecting agencies.*

516. Such are a few instances of the measures adopted. But the list is by no means exhaustive. The task is a difficult one, and, as the figures given at the commencement of this chapter show, in some provinces only the fringes of the problem have been touched. Nevertheless, there are signs that the uphill toil is bringing in results and one of the most hopeful indications is the appearance of Hindu Missions in the field. If the percentage of those at school is still small among these populations, yet the progress has been quickened in recent years. When it is considered that only 3·22 per cent. of the total population of India is at school, a percentage of 2·13 among the depressed classes of Madras is in comparison not altogether unsatisfactory. As an instance of results gained, the Namasudras of Bengal may be cited. A few years ago these were regarded as beyond the pale. There are now 100 Namasudra boys reading in colleges, 1,489 in the high and 1,690 in the middle stage, quite apart from a much larger number in primary schools. This community now considers its enumeration among depressed classes as a serious set-back to its social development. So steady has been their progress that, in the opinion of the Director, their classification under a higher category is justified. *General effect.*

CHAPTER XIX.

EDUCATION OF DEFECTIVES.

Paucity of facilities.

517. One would suppose that, in a country where charity is a tradition and a duty, every convenience would be provided for the comfort of the defective. But the very prevalence of this charitable spirit militates against the institution of schools. Where the necessaries of life are assured to them, the reason for affording an occupation to the helpless is not obvious; and the idea has not yet matured that such occupation is a source not merely of livelihood but of happiness. The Madras report says that parents are extremely reluctant to send defective children to school; and the same remark occurs in the Burma report with reference to schools at large centres. Nevertheless, missions have started schools and enlightened Indians are taking up the work.

Institutions.

518. In 1911, the number of blind or deaf and dumb between the ages of 5 and 15 was 80,620. The total at school is 802. The only satisfaction which can be felt about the figure is that it compares favourably with some 400 in 1907 and 430 recorded in 1912.* Bengal accounts for more than half the existing number.

The four mission schools at Palamcottah and *Madras* are reported to continue their excellent work. A fifth school has been founded at Rentachintala. *Bombay* has six schools—at Bombay, Poona and Ahmedabad. There are seven schools in *Bengal*, two in *Burma* and two in the *Central Provinces*. These last were opened by two Indians, who first underwent the necessary training. There are schools for the blind at *Lahore* and at Ranchi (*Bihar and Orissa*). The Burma schools have effected some complete cures of blindness.

In 1916 the Government of India addressed local Governments pointing out the inadequacy of the provision made, and suggesting various improvements, such as agencies for providing industrial work for defectives who have left school, greater uniformity of courses, a proper combination of general and industrial education and attention to physical training. It was recognised that the chief want is qualified teachers and that assistance might be given for training arrangements.

In Bombay, a committee is being formed to conduct a careful investigation into the problem. Schemes for the education of deaf-mutes are on foot in Burma.

*The number in 1912, however, was undoubtedly larger than this, since the Madras report gave no figures. The small number of defectives understood to be receiving instruction in the Punjab was recorded neither in 1912 nor in 1917.

CHAPTER XX.

REFORMATORY SCHOOLS.

519. There are seven reformatory schools with 1,228 boys in them against 1,294 boys in 1912. The cost is ₹2,30,123 against ₹2,49,167. The average cost of a pupil is ₹104·3 in Madras, ₹111·7 in the United Provinces, ₹223 in Delhi, ₹243·6 in Burma, ₹256·6 in Bihar and Orissa, and ₹343·3 in the Central Provinces. The cost in Bombay is reported as practically nil, though the report on the Yeravda schools gives the net cost as about ₹200. The average for India is ₹182·9. *Institutions.*

These schools are at Chingleput in Madras, Yeravda in Bombay, Hazaribagh in Bihar and Orissa (which serves for that province, Bengal and Assam), Chunar in the United Provinces, Delhi (for the Punjab), Thazi in Burma and Jubbulpore in the Central Provinces. There is also the David Sassoon Reformatory Institution for Bombay city; this is an aided institution under private management.

520. The management of reformatories is under the departments of public instruction, the fact thereby being recognised that they are schools for the education and reform of boys, and not jails. Trades are taught and a considerable amount of freedom is now permitted to the boys. The following details are of interest in this connection. *System of training.*

At Chingleput the system of giving boys greater liberty and reposing more trust in them has been developed; an annual camp is held at the seaside; the boys compete in games with other schools; well-behaved boys are allowed out without escort and the monitorial system is used to encourage boys to police themselves. This treatment has had a good effect on the school and religious instruction is imparted. Fifteen boys are serving at the front and several enlist each year; the boys have contributed from their earnings towards war funds. At Yeravda outside work is taken, religious instruction is given, cricket and foot-ball are played, and the boys are taken for walks and sight-seeing. The boys of the David Sassoon School are employed in workshops, in the garden and in neighbouring mills. They are allowed to go on leave to see their parents. ₹50,000 has been collected as an 'after-care fund' with the intention of founding a home where discharged boys will be looked after till they are able to fend for themselves. At Chunar there were some unsatisfactory incidents including attempts at escape; but these are not unnatural, since the freer life allowed gives greater opportunity, and the Director considers that the boys are healthier and happier. Music, singing and dramatic performances are a feature at the Delhi school and the boys have an annual holiday in camp, when the daily routine is relaxed and boys may ramble about unaccompanied. It is satisfactory to learn that there has been no betrayal of this confidence. Religious instruction is given at the Insein school and athletic sports were held for the first time in 1916. The sanitary conditions of Hazaribagh school have been improved at considerable expense. A large number of the boys volunteered for work in Mesopotamia, and some have enlisted in military Bands. The Jubbulpore school is doing good work and elicited praise from Commissioner Booth-Tucker of the Salvation Army.

521. As regards after-careers of discharged boys the following table gives certain information. *After careers.*

—	Number who left the school in the last 5 years.	Number traced.						Untraced.	
		Employed.	Unemployed.	Reconvicted.	Placed under police surveillance.	Died.	Total.		
Madras	252	159	4	38	3	6	210	42	
Bombay	485	346	23	16	2	4	391	94	
United Provinces . .	193	105	9	11	1	1	127	66	Includes 17 migrated.
Punjab	180	125	8	25	..	5	163	17	
Burma	126	46	21	3	1	3	74	52	
Bihar and Orissa . .	508	305	14	97	53	15	484	24	
Central Provinces and Berar.	53	41	2	1	..	..	44	9	
Total .	1,797	1,127	81	191	60	34	1,493	304	

Prison schools. 522. There are also prison and convict schools. Madras has ten schools for convicts with 1,085 on the rolls. Juvenile convicts at one of the jails in the Central Provinces are taught by literate convicts.

New schools. 523. Proposals were made during the quinquennium for the establishment of a reformatory school in Bengal. The Governments of Madras and Bengal also contemplate fresh legislation regarding juvenile offenders, and Mr. Melville, who was formerly an inspector of industrial and reformatory schools under the Home Office and is now an inspector in Madras, has been at work on this subject.

CHAPTER XXI.

PRIVATE INSTITUTIONS.

Definition. 524. Private institutions have already been negatively defined (paragraph 4). They fall outside the departmental system, are not necessarily inspected (though inspecting officers often visit them to see if they wish or are fit for recognition) and do not always send in returns. They are classed as advanced institutions which teach a classical language, elementary schools which teach mainly the vernacular or only the Koran, and other schools of a miscellaneous character.

Figures. 525. The figures for these institutions are uncertain. The returns show 37,803 schools with 644,638 pupils, against 39,893 with 651,996 pupils five years ago. From 1886 onwards till the quinquennium 1906-07 the schools had shown a steady increase. During and after that quinquennium they slightly declined in number, but pupils continued to increase. The quinquennium 1912-17 for the first time witnessed a decline in pupils. The decline, both in schools and pupils, has taken place among elementary and miscellaneous schools; advanced schools, teaching oriental classics, have actually increased (see supplemental tables 199 to 204). As already stated in paragraph 303, the increase among advanced schools and pupils has taken place mainly in Burma; the rest of India shows only a small increase, which is not shared by all provinces. It appears that in Burma some schools, previously classed as elementary, are now classed as advanced. This would partly account for the decline in elementary schools. Another reason is the constant tendency of these institutions to transform themselves into recognised *maktabs*, etc., which are now largely classed as primary schools.

Classification. 526. In this connecton a reference may be made to appendix XI, which shows private institutions classed under different headings and also indicates the extent of the transformation of some, though not all, kinds of private schools into recognised schools. This table also shows some of the expenditure involved in the maintenance of these schools. This last item is so uncertain that no figure is included in general table IV. Occasionally, however, government expends money on private schools. Thus, 693 such schools in Burma receive rice-grants for Pali-teaching.

(*a*) *Advanced.* 527. As regards advanced institutions, the United Provinces stands highest in the number and reputation of its Arabic and Persian teaching schools. The Chittagong division of Bengal also possesses many small *madrassas*. Sanskrit *tols* are numerous in these two provinces and in Bihar and Orissa. The *tol* is generally a small institution centred round a single hereditary *pandit* and admitting a handful of Brahman pupils—on the average only eleven. The *madrassa* or *maktab* is larger and of a more democratic character, it often adds to classical instruction some secular instruction in Urdu. In this category fall also the Pali-teaching *kyaungs* of Burma, some of which are large institutions, containing a number of monks and students.

(*b*) *Elementary.* 528. Among elementary institutions are the smaller *maktabs*, the *mulla* and the Koran schools. These are capable of being turned into primary schools by the addition of secular instruction, as is indicated by the figures in appendix XI. The *pathshala* is generally a small venture school of the indi-

genous type. The smaller *kyaungs* of Burma are very numerous and there is no doubt that many of them are not shown in the returns. They impart a certain amount of instruction in reading and writing to a considerable number of pupils. But they do not teach arithmetic and a large percentage of them are reported to be of little value for the spread of education. A systematic effort was made during the quinquennium to register them and thus bring them within the recognised system. The attempt had some success but the outbreak of the war prevented the appointment of a sufficient number of inspecting officers to render the results permanent. An examination called the *Mulagananthincha* was also instituted to encourage the youths who teach in these places (the *hpongyi* himself looking after the discipline) to qualify themselves and grants of rice were awarded to monasteries which presented successful candidates.

529. The miscellaneous class of private schools contains vernacular institutions for special classes of children, vocational schools and schools which teach English. Among the first may be mentioned the special girls' schools, called *Mahakali pathshalas*, in Bengal, where the greater part of the departmental curriculum is taught combined with the recitation of hymns and prayers in Sanskrit and some instruction in the ritual of family *puja* and domestic economy (see paragraph 423). Some of the schools for Chinese in Rangoon are private institutions. Schools of the second class are generally for the instruction of children of *mahajans* in the system of arithmetic used by that community; they were described in the last review. Among the last kind are those places which attempt to combine western education with the retention of the traditional ideas of India. Such is the famous *Gurukul* near Hardwar, which now has several branches, and Sir Rabindra Nath Tagore's *Santiniketan Brahmacharyya Ashram* at Bolpur. These are boarding schools where the pupils are brought up under a discipline which consists of moral and religious training on Hindu lines and the inculcation of civic duties. One of the inspectors writes of Bolpur as follows. (c) *Miscellaneous.*

> " The boys are taught to be self-reliant, to be helpful to one another, to be courteous to strangers, to attend on visitors, to be dutiful, unselfish and God-fearing. The monitorial system works with marked success, and the senior boys are given an important share in maintaining discipline and enforcing good conduct through their own courts of enquiry. There are no classes in the accepted sense. Studies proceed by a self-contained syllabus, which gives a sound general education but does not lead up to any recognised examination. Indeed, examinations of all sorts are tabooed, as also is everything savouring of cram. The subjects taught are Sanskrit, Bengali, mathematics, English, history, geography, physical science, elementary agriculture and dairy farming. . . . . The teachers, some of whom have been educated in England or America, receive but modest salaries. For the most part the Herbartian system of instruction is employed. There are no class rooms, for the boys seat themselves on mats round their teacher in the shade of umbrageous trees."

The inspector specially mentions the attitude of the pupils towards agrarian studies; they tend the farm cattle and take a pride in doing so.

In Bihar and Orissa the growth of numerous schools which aspire to rise to the high and middle status is mentioned. These are found in other provinces also. They are not private institutions in their ultimate intention and remain so only so long as they fail to obtain recognition.

530. In the last review was mentioned the existence of national schools in Bengal, some of which had been established for the reception of pupils connected with the anti-partition agitation, or in consequence of other action taken against disorderly institutions, or by teachers dismissed for misconduct. Certain of these schools earned an evil notoriety. The Bengal District Administration Committee's report, published during tht quinquennium, gives some account of these and similar institutions. National schools declined from sixteen to six during the quinquennium. *National Schools.*

CHAPTER XXII.

TEXT-BOOKS AND PUBLICATIONS.

Text-book committees.

531. The text-books used in schools are either privately produced or specially prepared by an official agency.

The existing method of prescribing text-books, etc., was introduced in 1900. A limited choice of books is given in government schools, a wider choice in aided schools and unlimited choice in unaided schools. (In Assam the same list of options serves for all kinds of recognised schools.) The lists of books from which selection may be made are framed by the local Governments on the advice of their text-book committees.

When a publisher desires a work to be adopted as a text-book, he sends copies of it to the Director, who, after a cursory examination intended to ascertain that the book is generally of the kind required, sends it to the text-book committee. The members of the committee receive copies and give their opinions, and in accordance with these opinions the Director advises government, who, if the book seems suitable, prescribe it as a text-book or recommend it as a prize or library book. There are modifications of this system. Thus, in Bombay, the divisional inspectors, who are presidents of the various vernacular text-book committees, decide what books shall be submitted to those bodies; and the vice-principals of the training colleges make a preliminary review—an onerous task, which has resulted in largely divorcing them from their teaching duties. In the Punjab there is a reporter on books, who is an officer of the provincial educational service usually selected for his literary attainments. He first places the book before the Director, who, unless it is obviously valueless, forwards it to the Secretary of the Committee. In this case the copies are sent by the secretary not to the members of the committee, but to two, three or four reviewers, who are generally not members. Their reports and the book itself are placed before the next meeting of the sub-committee which deals with that particular type of work; and the recommendation of the sub-committee is submitted to the next general meeting of the text-book committee. Other small variations exist; *e.g.*, in Assam it is school managers, etc., and not the publishers, who bring new books to the notice of the authorities.

532. Each of the larger provinces has one or more text-book committees. That in Madras comprises 40 members. In Bombay there are six committees —one for non-vernacular books, the others for Gujarati, Marathi, Kanarese, Sindhi and Urdu. In Bengal there are two with headquarters at Calcutta and Dacca; the former has 14 official and 7 non-official members, the latter 9 official and 8 non-official. The committee in Bihar and Orissa has nine sub-committees. In Assam there are one general committee and four local committees, for the Assam Valley, the Surma Valley, and the Khasi and Garo Hills, respectively.

533. Some idea of the amount of labour thrown upon these committees can be obtained from the following figures. During the quinquennium 1,644 works in the four main vernaculars of the presidency were received in Bombay, and the committees reported on 1,522 of these. Each of the two Bengal committees examines about 1,000 books annually, and 1,910 were either reported on or recommended. In five years the United Provinces committee considered 5,050 books and approved 1,474. The Bihar and Orissa committee, though not established till more than one year of the quinquennium had passed, received 3,574 books for examination. In a single year in the Central Provinces 714 books were received, of which 58 were sanctioned as text and 545 as prize or library books.

534. The work of the committees is carried on in a self-sacrificing and disinterested spirit by the members, both official and non-official. It is in-

evitable, however, that, with the increasing number of books submitted, some delay should occur, resulting in dissatisfaction on the part of publishers. Restrictions on the books used in public schools are also sometimes resented. It is natural that there should be competition for the adoption of text-books. Mr. Hornell, quoting the figures of schools, remarks that they represent an enormous market, far surpassing the reading public of the popular novelist. To capture such a market, he says, is no mean achievement; but to be given a monopoly therein is to have secured a fortune. The system of prescribing books was criticised in 1916, by the Hon'ble Mr. R. P. Paranjpye, principal of the Fergusson College, Poona, who moved a resolution in the Bombay Legislative Council recommending the revision of rules. The whole question is engaging attention. Possible remedies for delay are the extension of the sub-committee system, which already exists to some extent, and the appointment of readers. As to the principle of prescription, the choice allowed is as a matter of fact fairly wide, the production of a good text-book is not the simple matter it might appear and a few select books, if prescribed over a wide area, can be produced and sold at a cheap rate. Arguments such as these apply mainly to text-books in the lower classes, but lose much of their force when applied to higher classes where reading is naturally of a more general nature, the choice of suitable books is larger and the need for any text-book is less. Nevertheless the set text-book has a certain popularity in India, its prescription is often regarded as essential for purposes of scholarship examination, and the universities largely prescribe such books for their matriculation and other examinations. These remarks touch language or literary text-books rather than those on mathematics, science, geography, history, etc.

535. Secondly, text-books are sometimes specially prepared. The work of preparing vernacular text-books in Bombay has been described in one of the occasional reports which issued from the bureau of education.* A set of English readers, histories and geographies has now been prepared in that presidency, as also hand-books of moral extracts, a geometry-book, a book on hygiene and vernacular readers for girls. The Punjab text-book committee is active in the production of books. Improved Hindi and Marathi readers have been produced for the Central Provinces and a set of Urdu readers for the North-West Frontier Province. *Preparation of text-books.*

The production of text-books by the University of Calcutta is mentioned in paragraph 227.

536. Allusion has been made in paragraphs 310 and 331 to the production of books and periodicals which are not text-books but have an educational interest. The Government of Madras have shown particular activity in the publication of dictionaries. They entrusted to the syndicate of the university the compilation of a Tamil lexicon and sanctioned a lakh of rupees towards its cost. An Oriya dictionary was published with the help of aid from the Governments of Madras and Bihar and Orissa. The Government of Madras also bore the cost of printing a Telugu-Savara dictionary. *Other publications.*

537. There are quite a number of educational magazines produced in India. The most prominent are *Indian Education* published in Bombay, the *Punjab Educational Journal* and the *Educational Review* published in Madras. Vernacular school papers are also produced; Bombay has four such of a general nature and two others (added during the quinquennium) which treat of educational subjects from the point of view of girls' schools.

The larger colleges and a number of high schools produce magazines.

* Occasional Reports No. 2. Vernacular Reading Books in the Bombay Presidency. By J. G. Covernton.

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ILLUSTRATIONS.

(Most of the buildings shown in these illustrations were erected during the quinquennium 1912—1917. They represent a small part of the building activity which took place in that period.)

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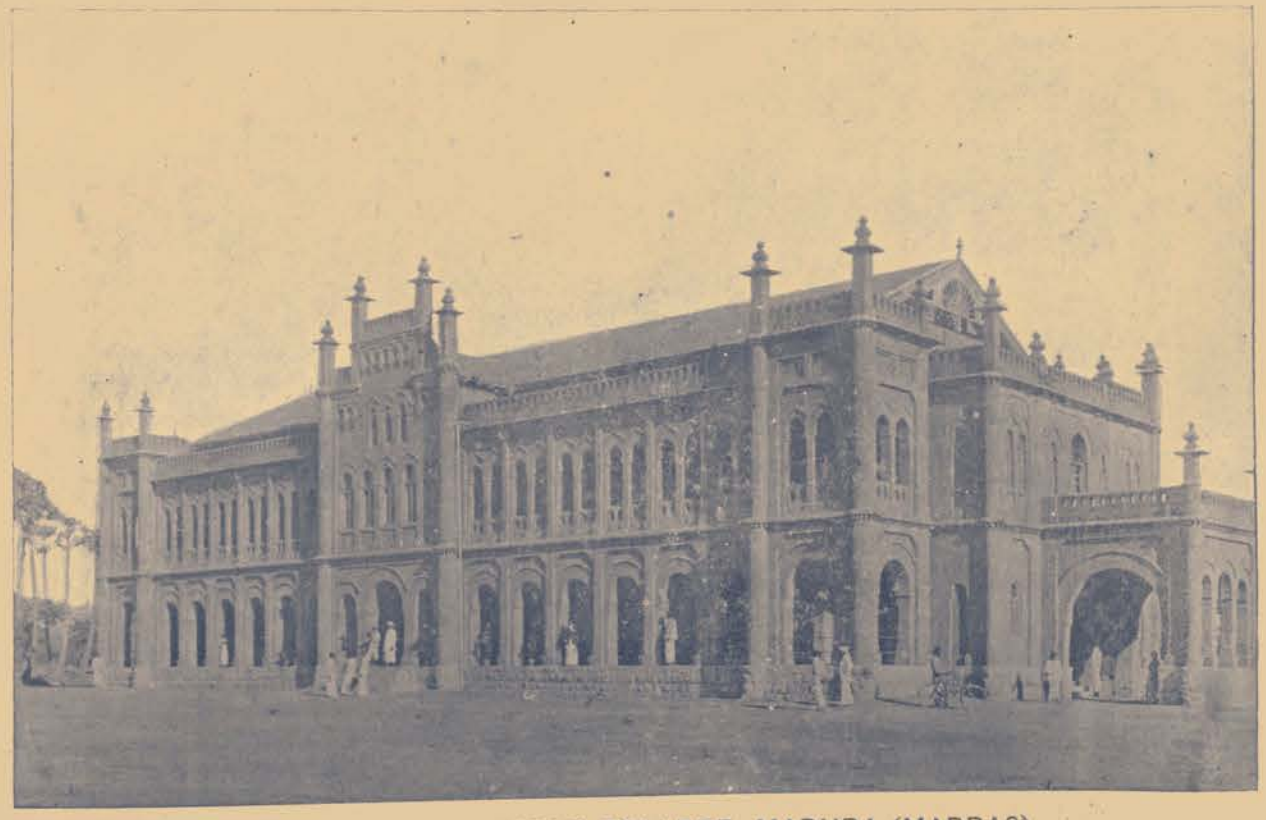

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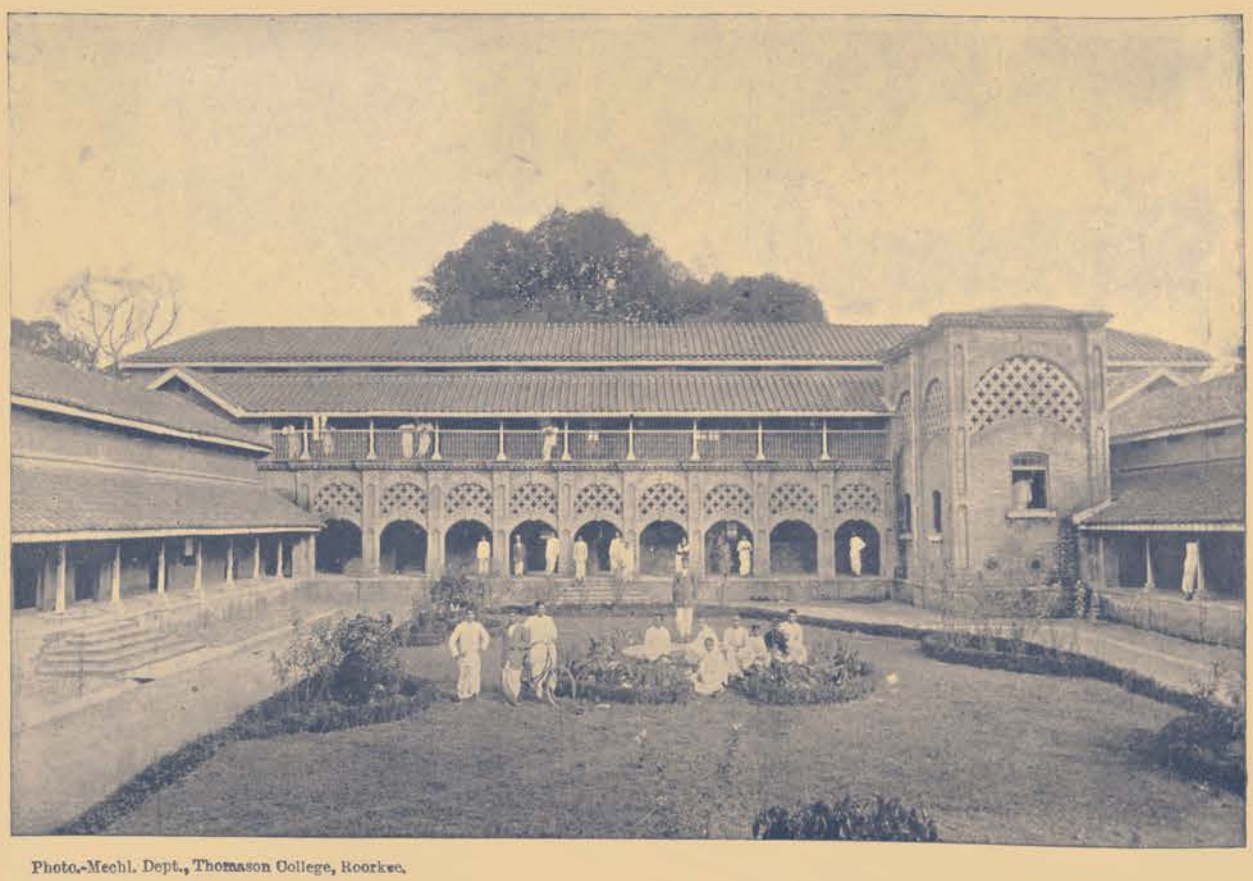

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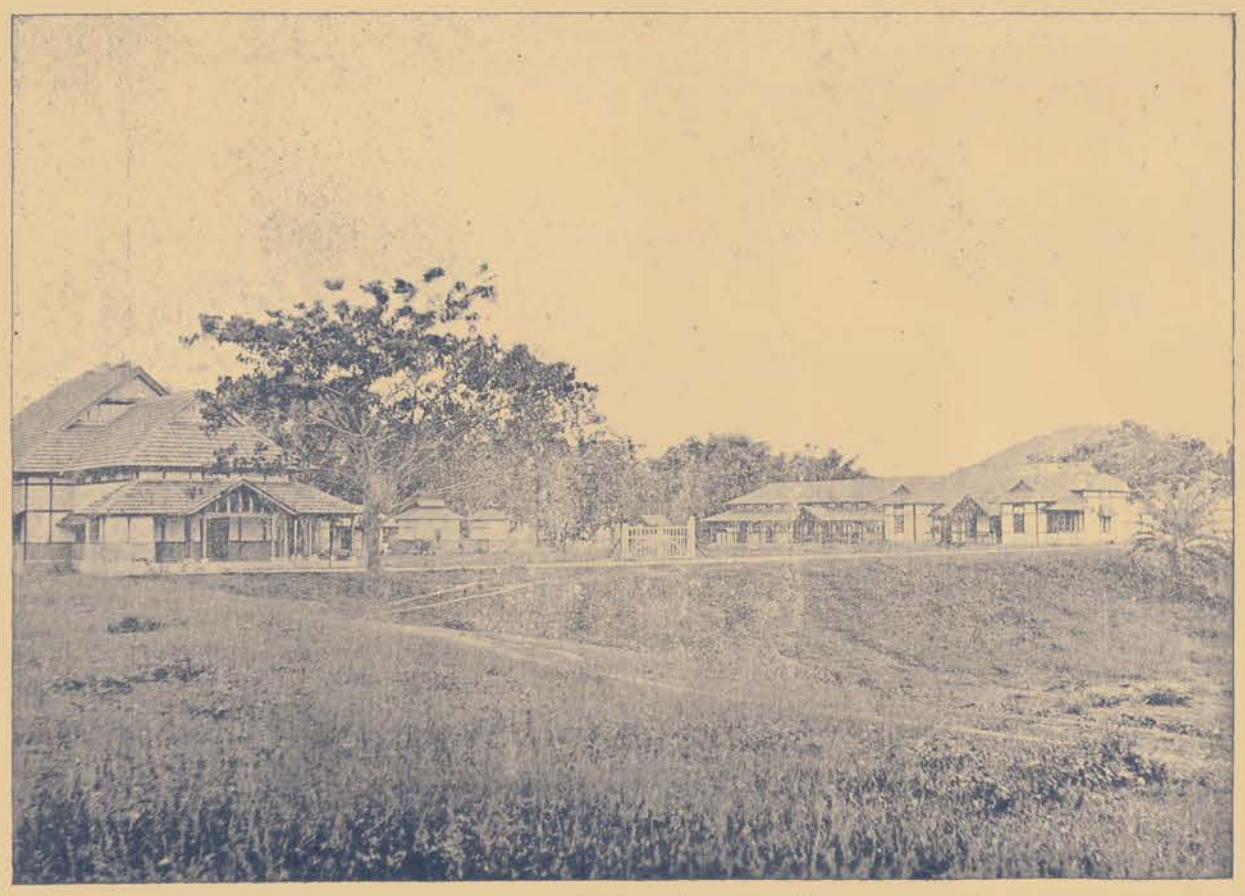

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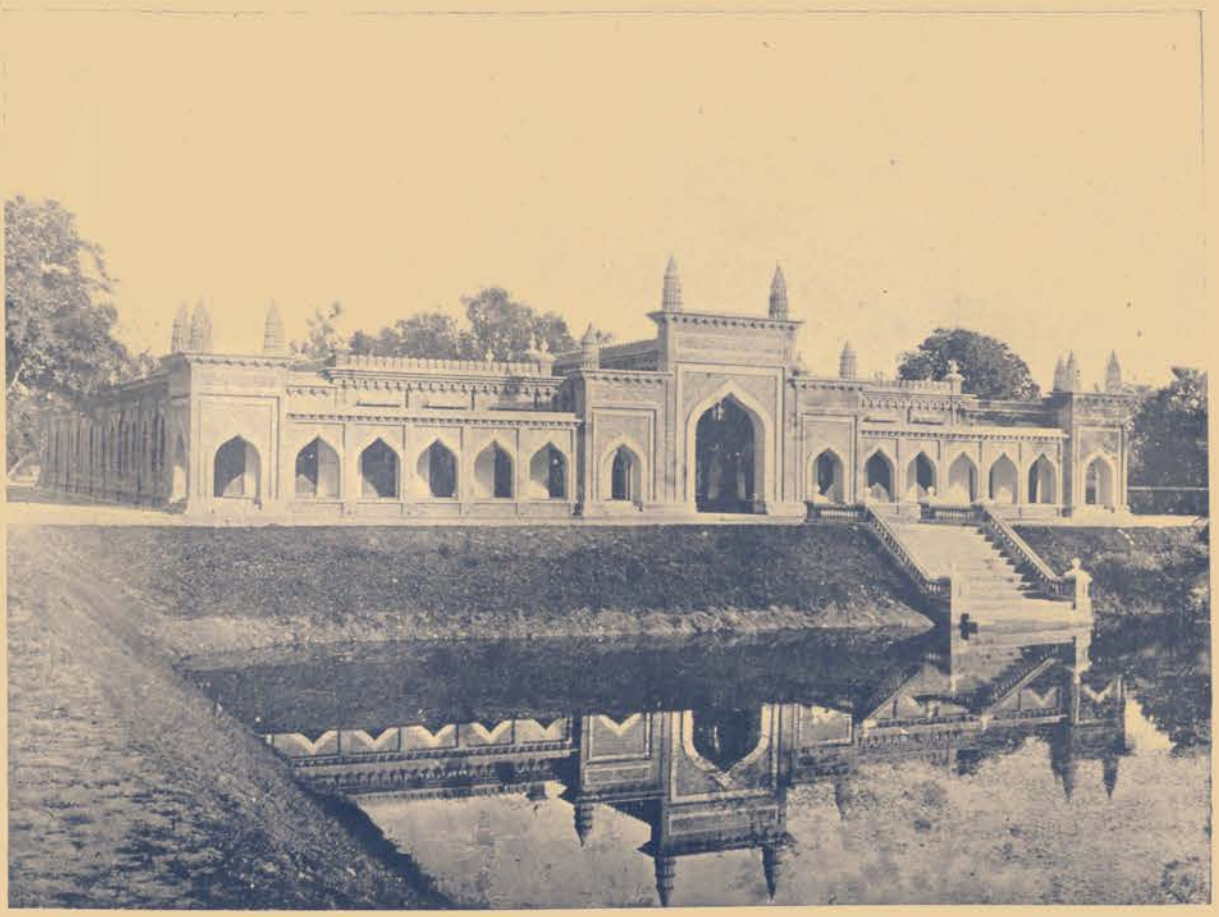

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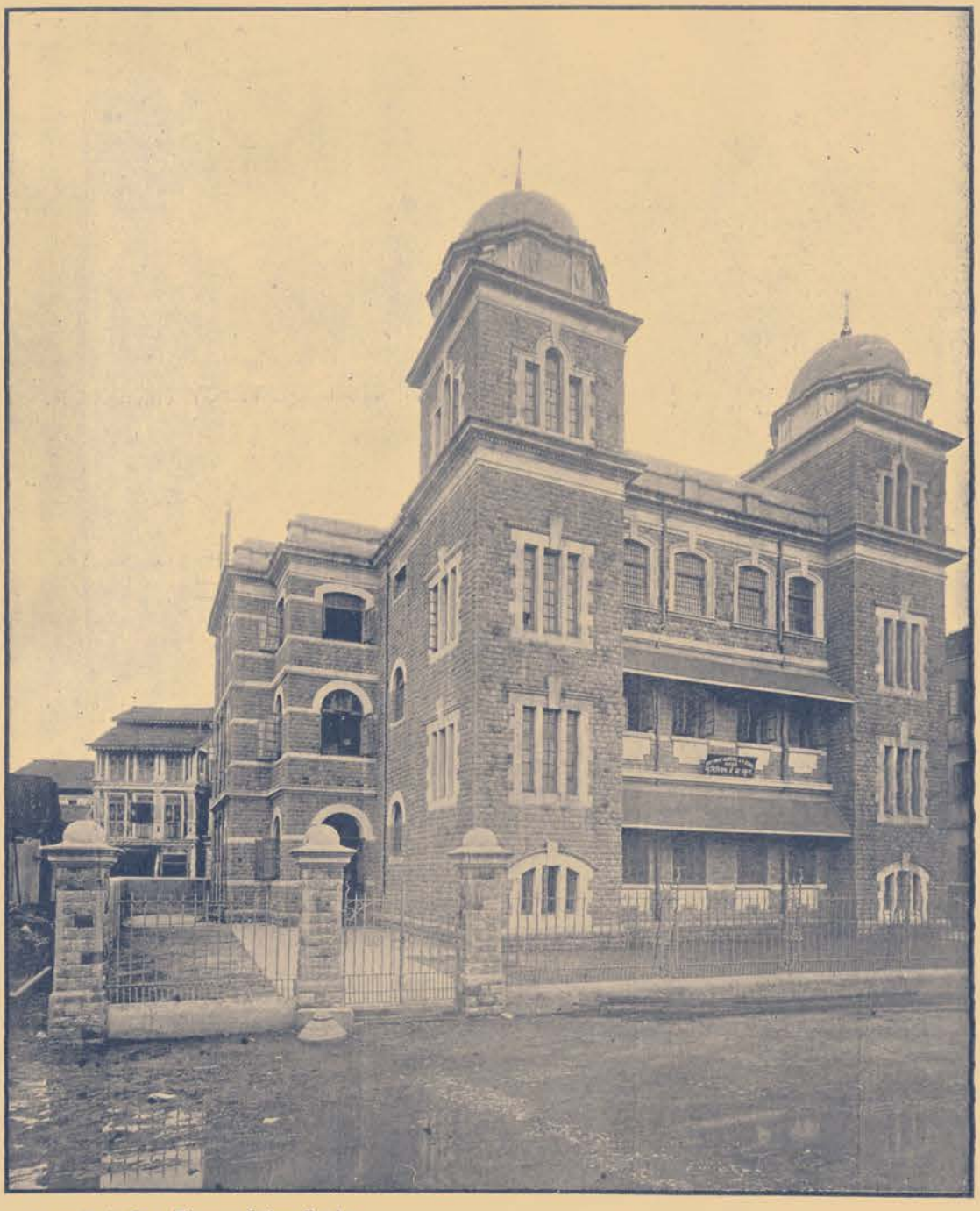

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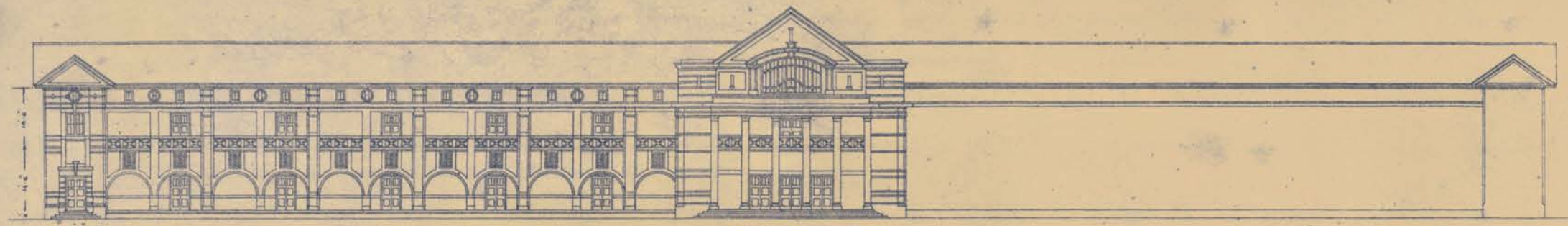

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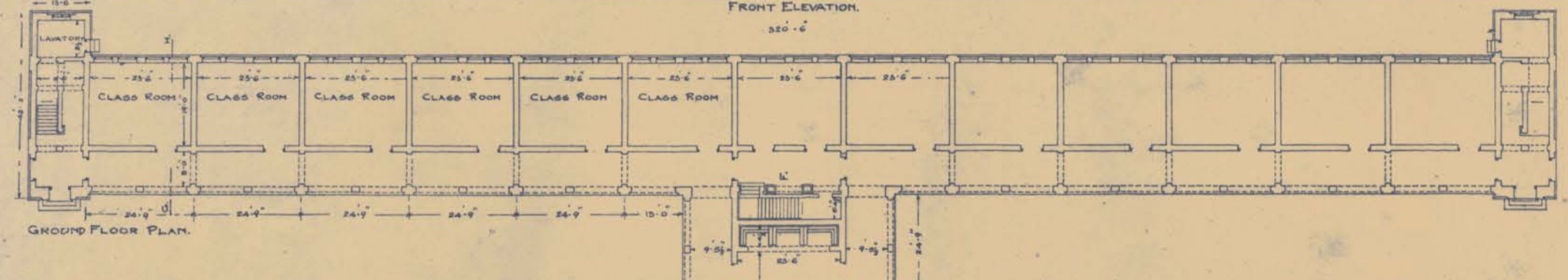

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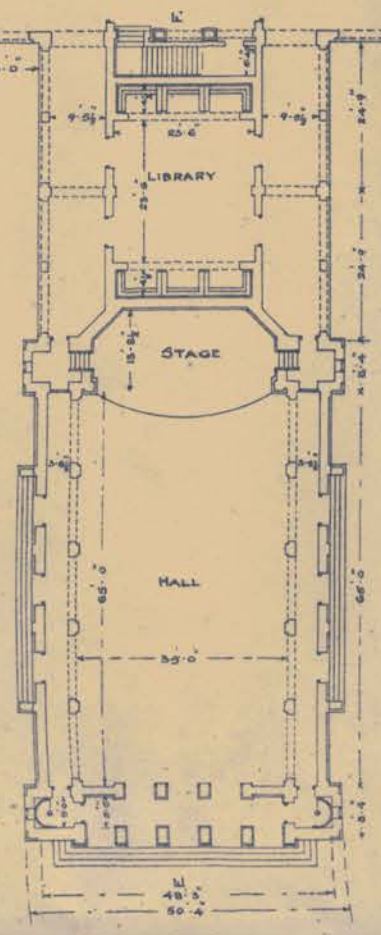

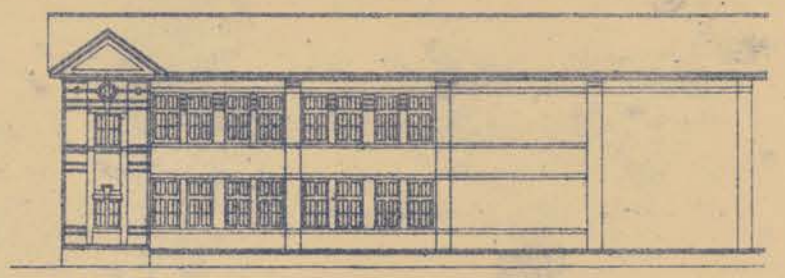

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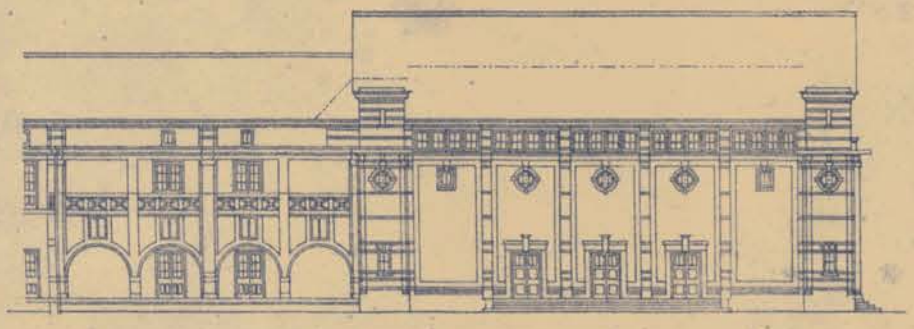

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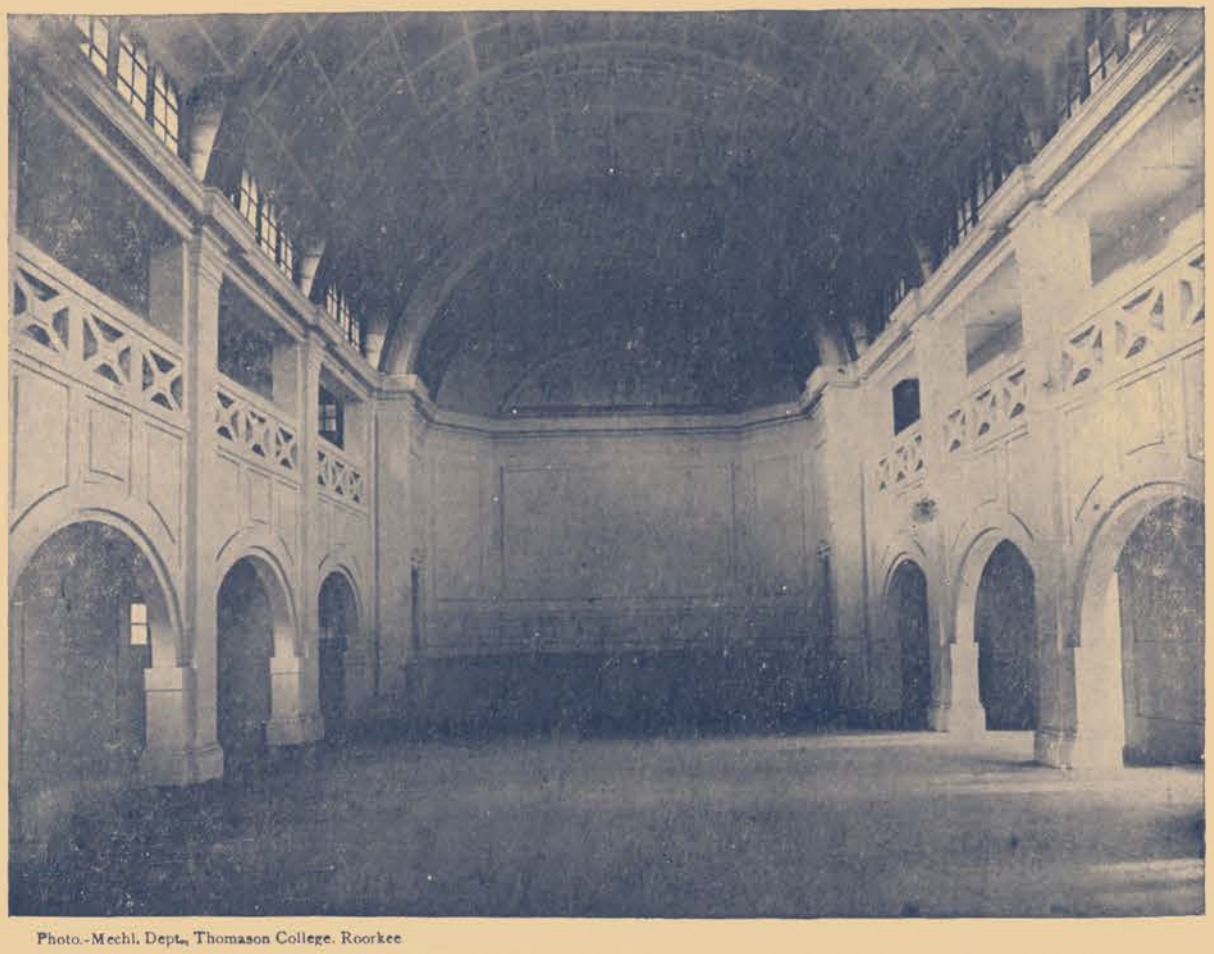
ZILLA SCHOOL (FRONT VIEW), MUZAFFARPUR (BIHAR AND ORISSA).

Photo. Mechl. Dept , Thomason College. Roorkee.

ZILLA SCHOOL (BACK VIEW), MUZAFFARPUR (BIHAR AND ORISSA).

ZILLA SCHOOL (WESTERN WING), MUZAFFARPUR (BIHAR AND ORISSA).



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LECTURE HALL, ZILLA SCHOOL, MUZAFFARPUR (BIHAR AND ORISSA .

C. M. S. HIGH SCHOOL, SEONI (CENTRAL PROVINCES).

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GOVERNMENT HIGH SCHOOL, BILASPUR (CENTRAL PROVINCES).

GOVERNMENT MUHAMMADAN HIGH SCHOOL, AMRAOTI (CENTRAL PROVINCES).

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GOVERNMENT HIGH SCHOOL, BHANDARA (CENTRAL PROVINCES).

MUHAMMADAN HOSTEL, GOVERNMENT HIGH SCHOOL, SILCHAR (ASSAM).

Photo.-Mechl. Dept., Thomason College, Roorkee.

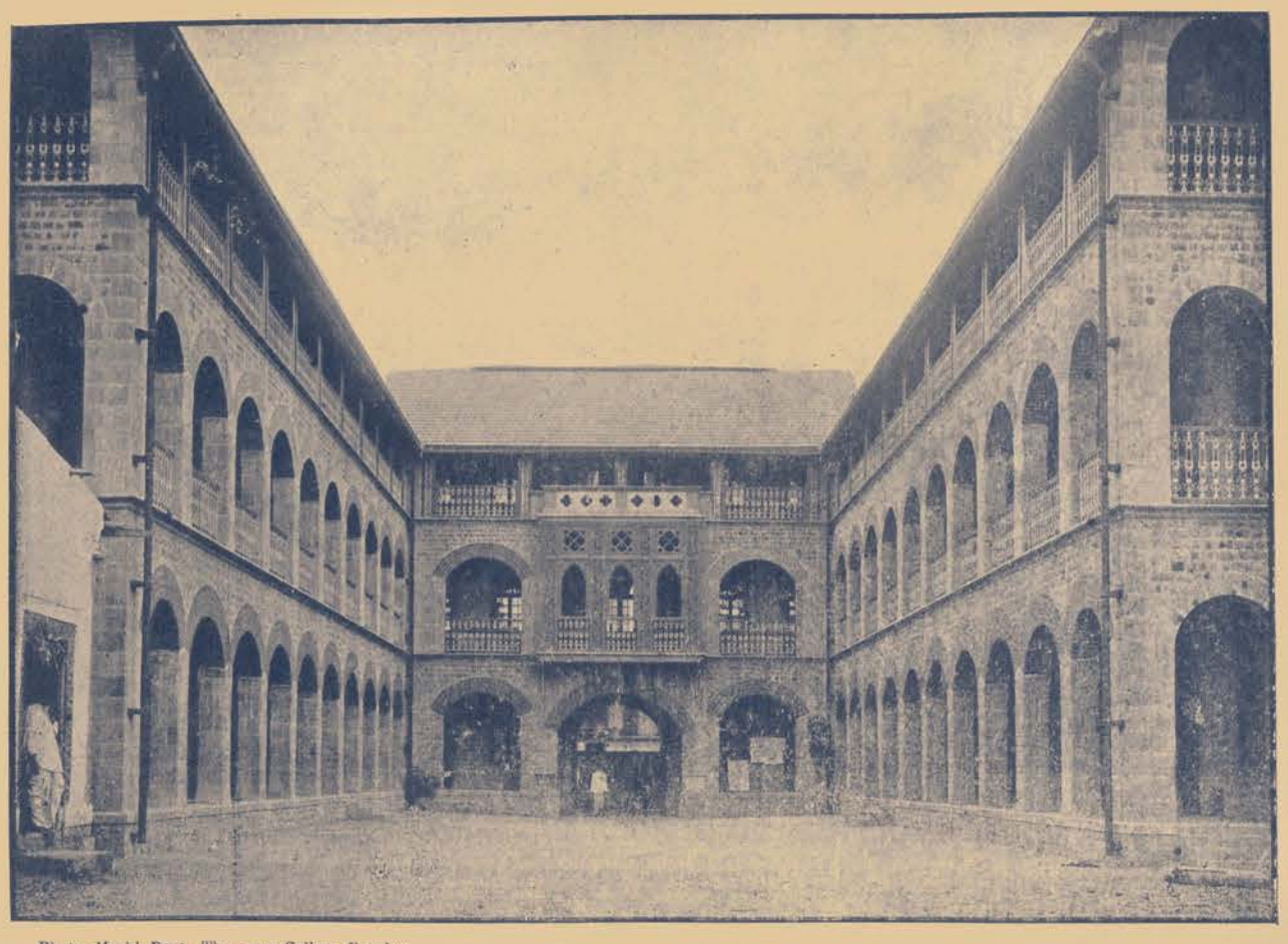
LAKHMI CHAND KHALSA HIGH SCHOOL, HARIPUR, HAZARA DISTRICT
(NORTH-WEST FRONTIER PROVINCE).

BOARD ELEMENTARY SCHOOL, DHARASURAM, TANJORE (MADRAS).

Photo. Mechl. Dept., Thomason College, Roorkee.

BHIL SCHOOL, DHADGAON, KHANDESH (BOMBAY).

LOCAL BOARD PRIMARY SCHOOL, NIMBGAONJALI, TALUKA SANGAMNER, AHMEDNAGAR DISTRICT (BOMBAY).



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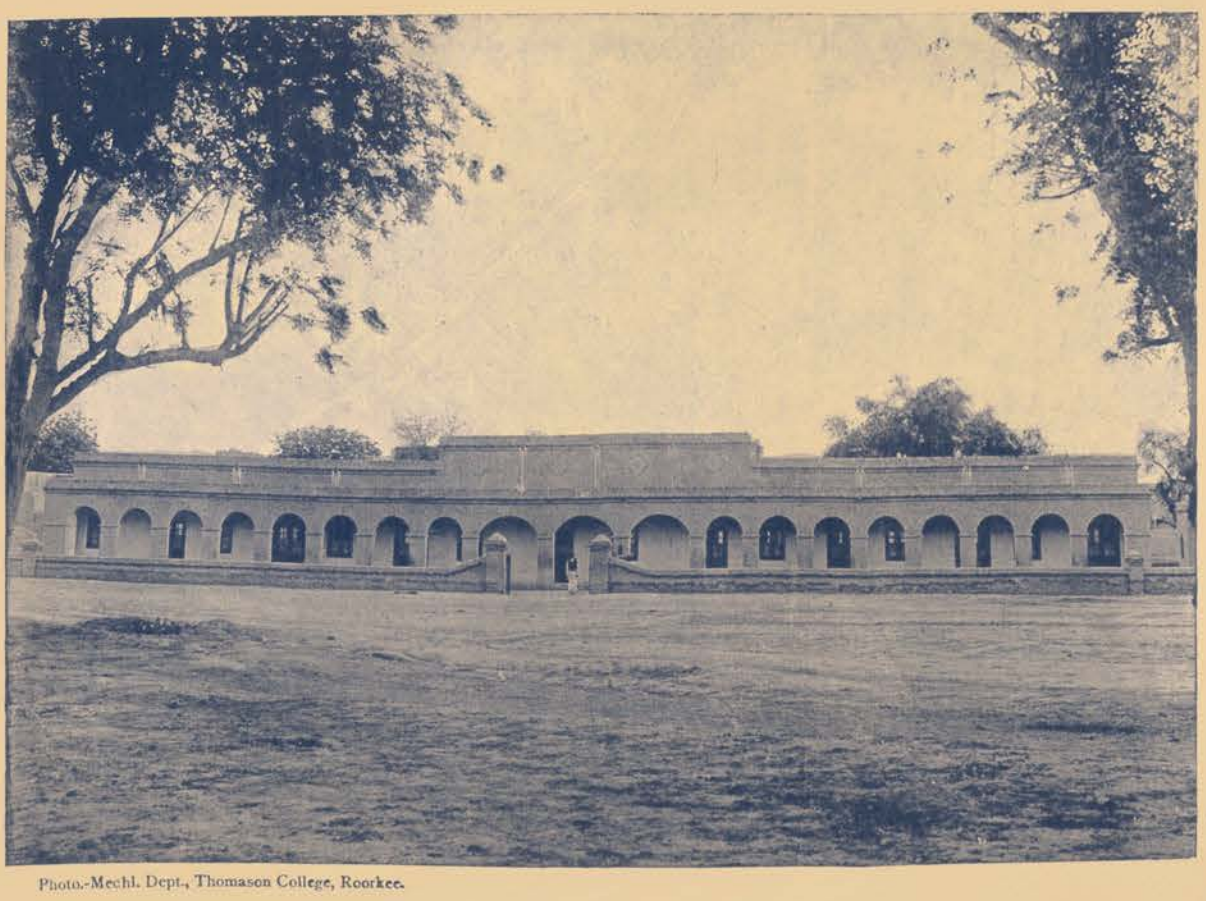
PRIMARY SCHOOL, NUTAN MARATHI VIDYALAYA, POONA (BOMBAY).

LOCAL BOARD PRIMARY SCHOOL, NEGLUR, TALUKA HAVERI,
DHARWAR DISTRICT (BOMBAY).

Photo.-Mechl. Dept., Thomason College, Roorkee.

LOCAL BOARD PRIMARY SCHOOL, HIREBAL, TALUKA RON,
DHARWAR DISTRICT (BOMBAY).

MUNICIPAL VERNACULAR SCHOOL (NO.1), SHOLAPUR (BOMBAY).



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DADU VERNACULAR SCHOOL, SIND (BOMBAY).

LOCAL BOARD SCHOOL, HARNAI, DISTRICT RATNAGIRI (BOMBAY).

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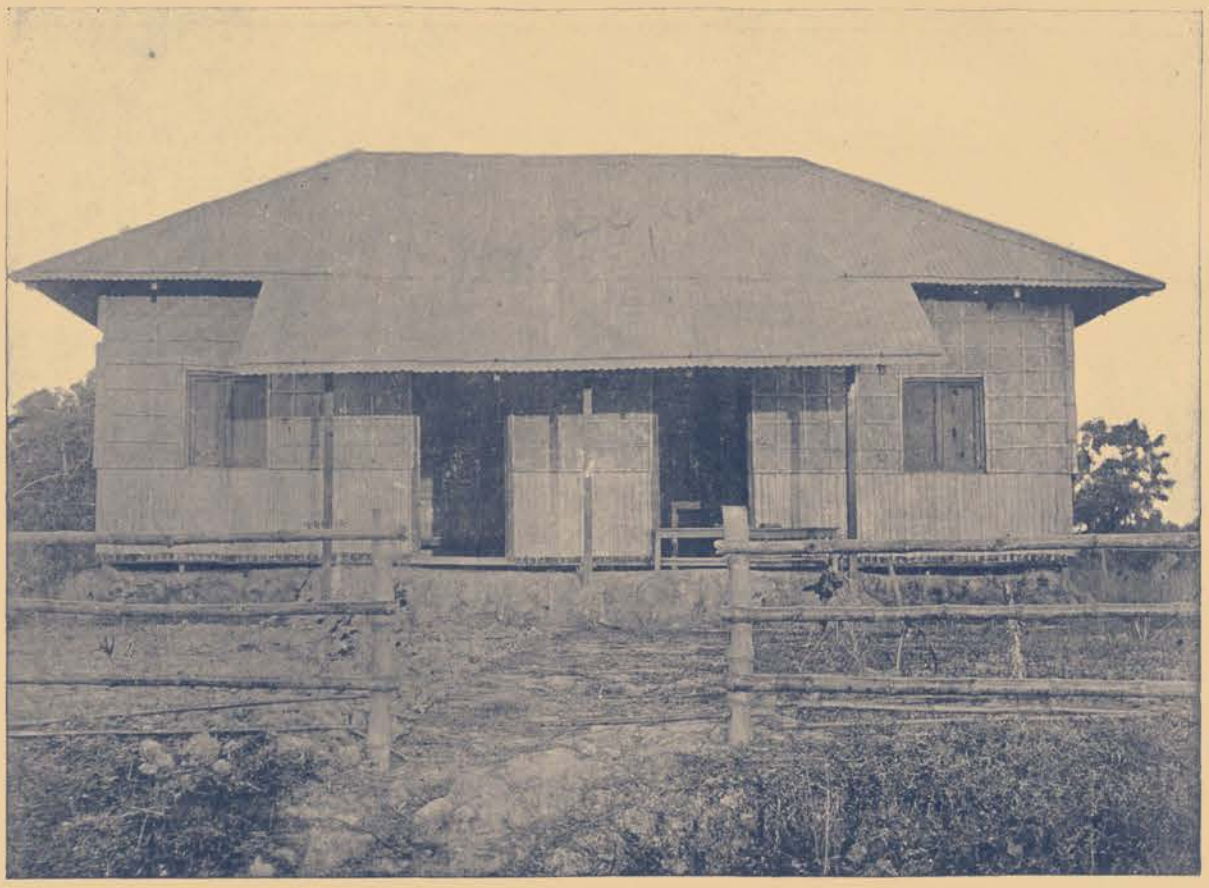
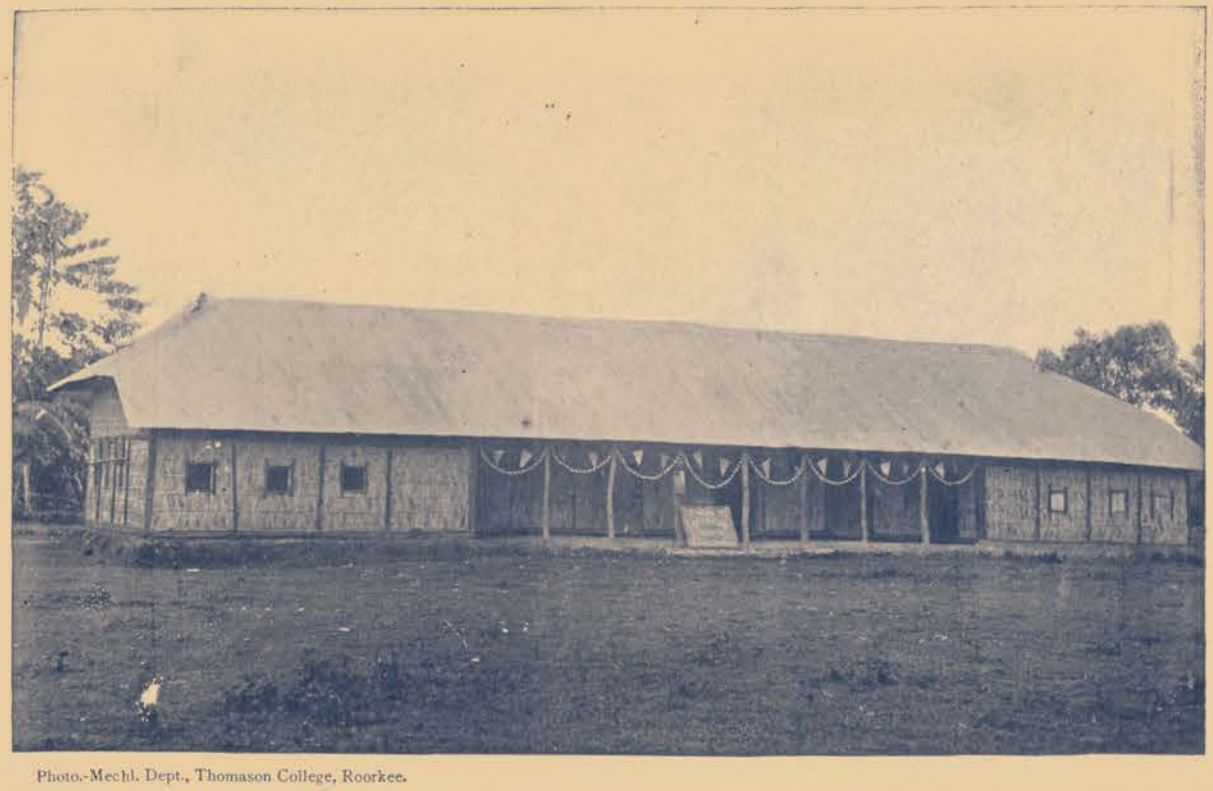
LOCAL BOARD SCHOOL, TELEGAON DHAMDHERE, TALUKA SHIRUR,
DISTRICT POONA (BOMBAY).



NIMTALA BOARD LOWER PRIMARY SCHOOL, FARIDPUR (BENGAL).



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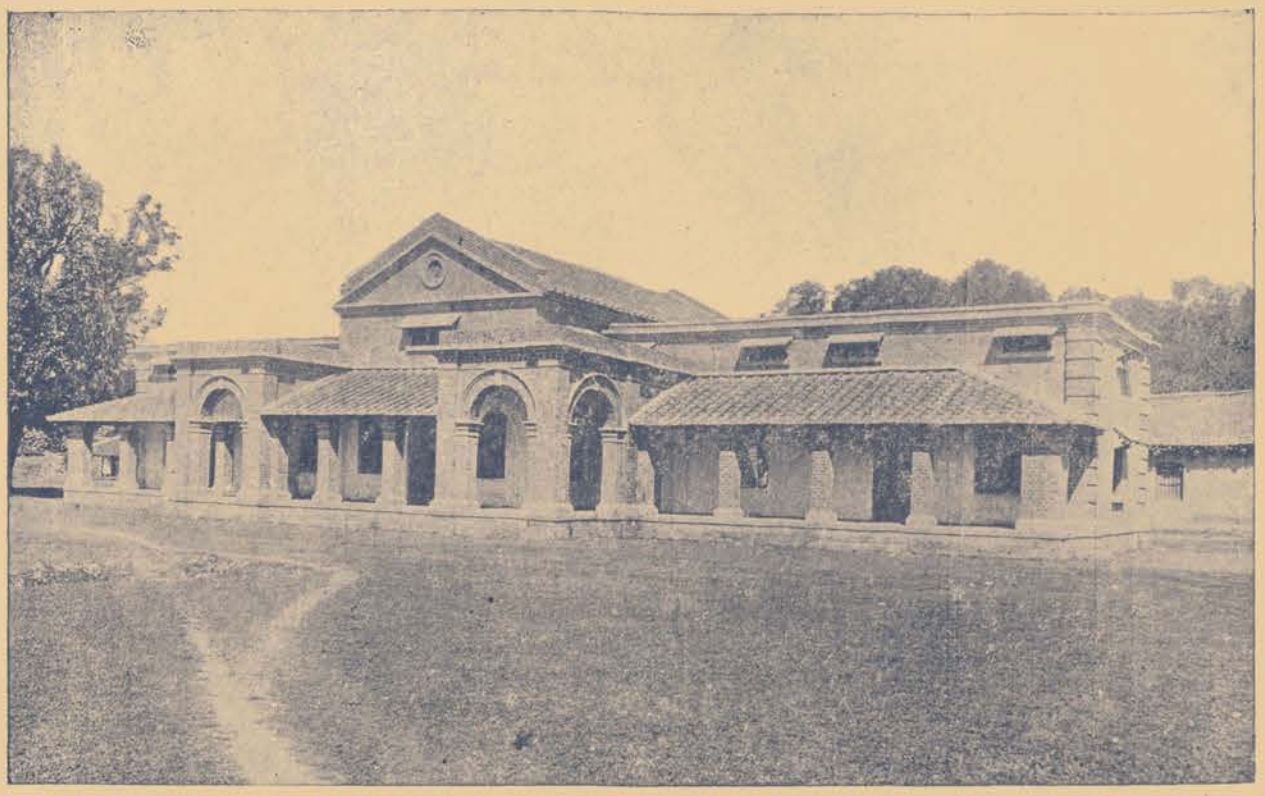
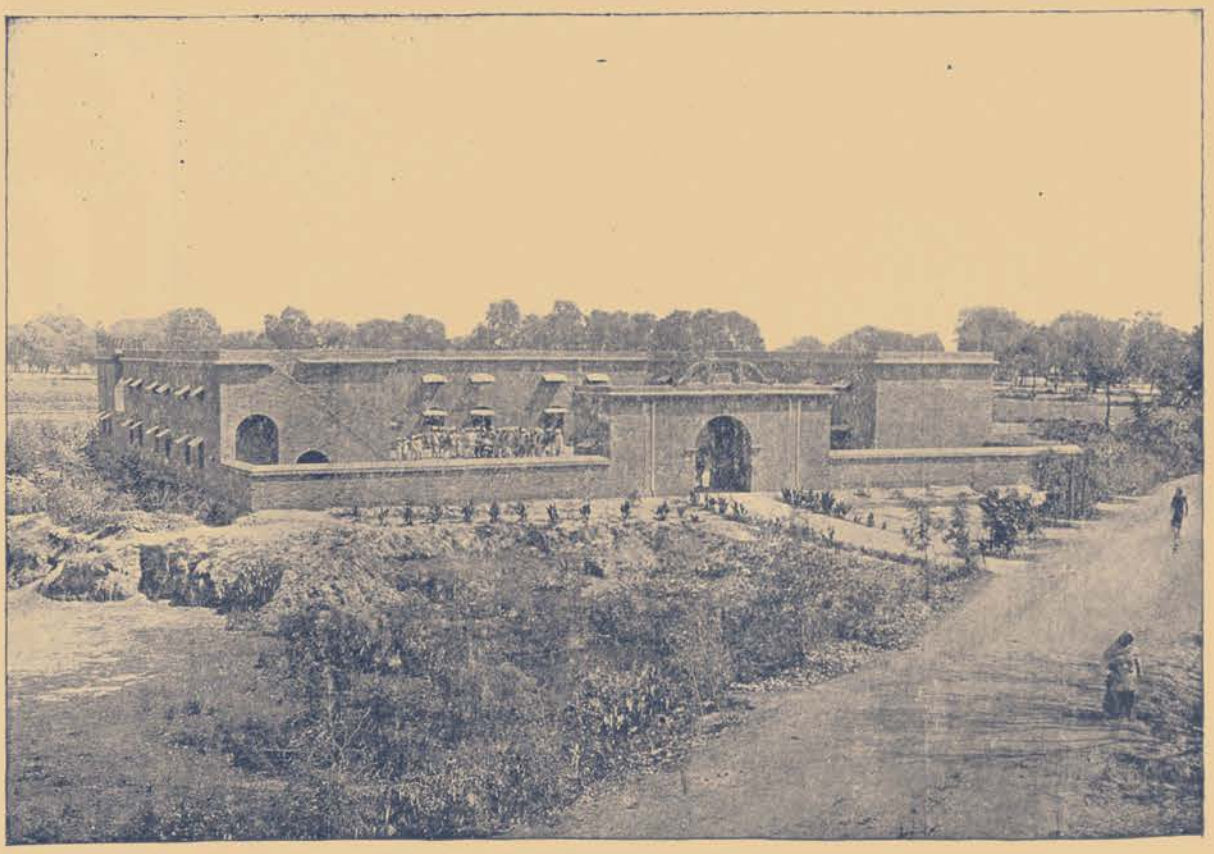
NARUNDI MODEL MIDDLE VERNACULAR SCHOOL, MYMENSINGH (BENGAL).



MIDDLE VERNACULAR SCHOOL, SHEOPUR, BENARES DISTRICT (UNITED PROVINCES).



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RAJA SANSI DISTRICT BOARD VERNACULAR MIDDLE SCHOOL,
AMRITSAR DISTRICT (PUNJAB).

CHHAJAL WADDI PRIMARY SCHOOL, AMRITSAR DISTRICT (PUNJAB).

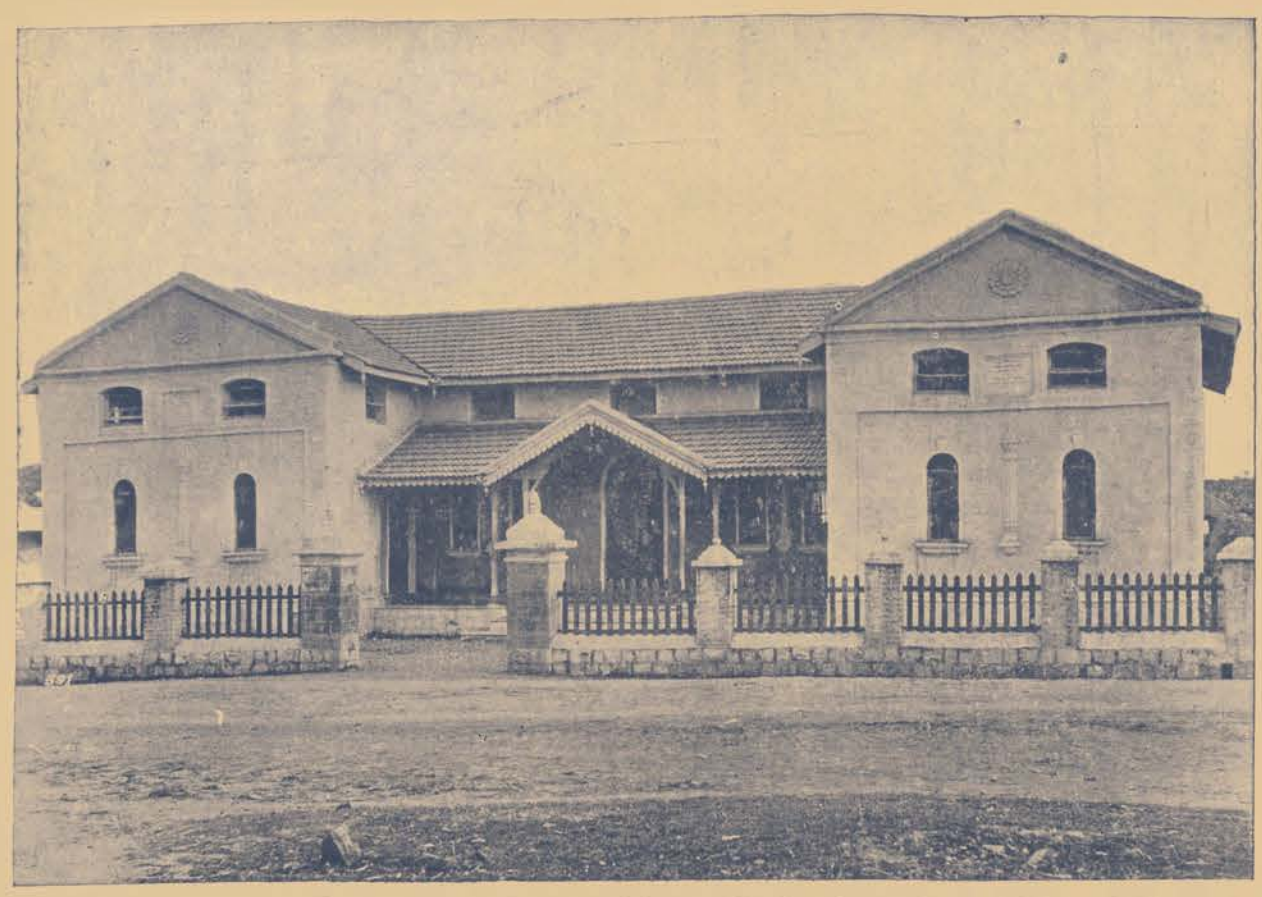
Photo.-Mechl. Dept., Thomason College, Roorkee.

CHEDRI MUNICIPAL BOYS' UPPER PRIMARY SCHOOL, RANCHI DISTRICT (BIHAR AND ORISSA).

PRIMARY SCHOOL, HARSHANKER MANIARI, MUZAFFARPUR DISTRICT (BIHAR AND ORISSA).

Photo.-Mechl. Dept., Thomason College, Roorkee.

DISTRICT COUNCIL SCHOOL, KURUD, RAIPUR DISTRICT (CENTRAL PROVINCES).

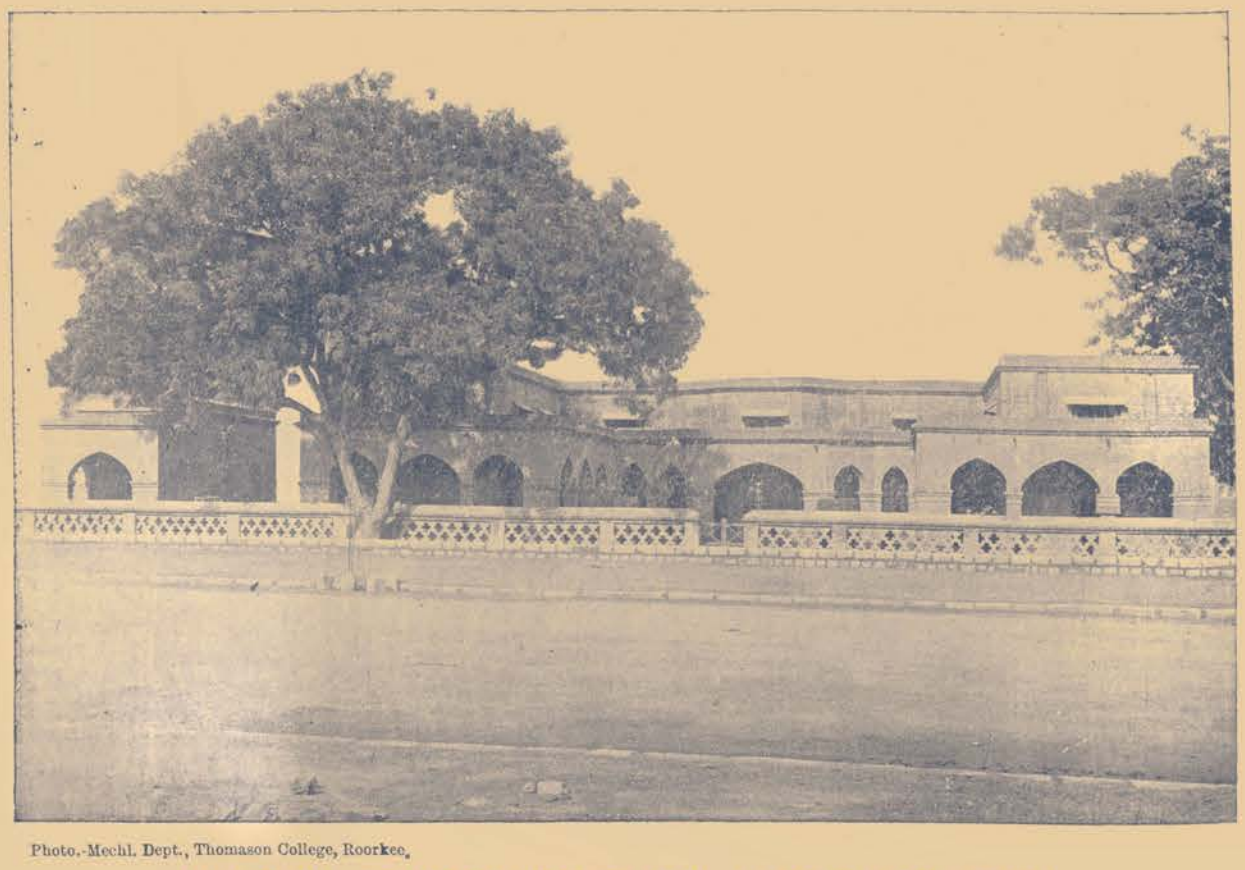


MUNICIPAL MARATHI PRIMARY SCHOOL, AMRAOTI (CENTRAL PROVINCES).

Photo.-Mechl. Dept., Thomason College, Roorkee.

DISTRICT BOARD MARATHI PRIMARY SCHOOL, NANDURA, PESHWA,
AMRAOTI DISTRICT (CENTRAL PROVINCES).

LAKHTAKIA MAKTAB, GAUHATI (ASSAM).



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MUNICIPAL BOARD BRANCH SCHOOL, LAHORE GATE, DELHI.

DISTRICT COUNCIL PRIMARY SCHOOL, KORADI, NAGPUR DISTRICT, CENTRAL PROVINCES.

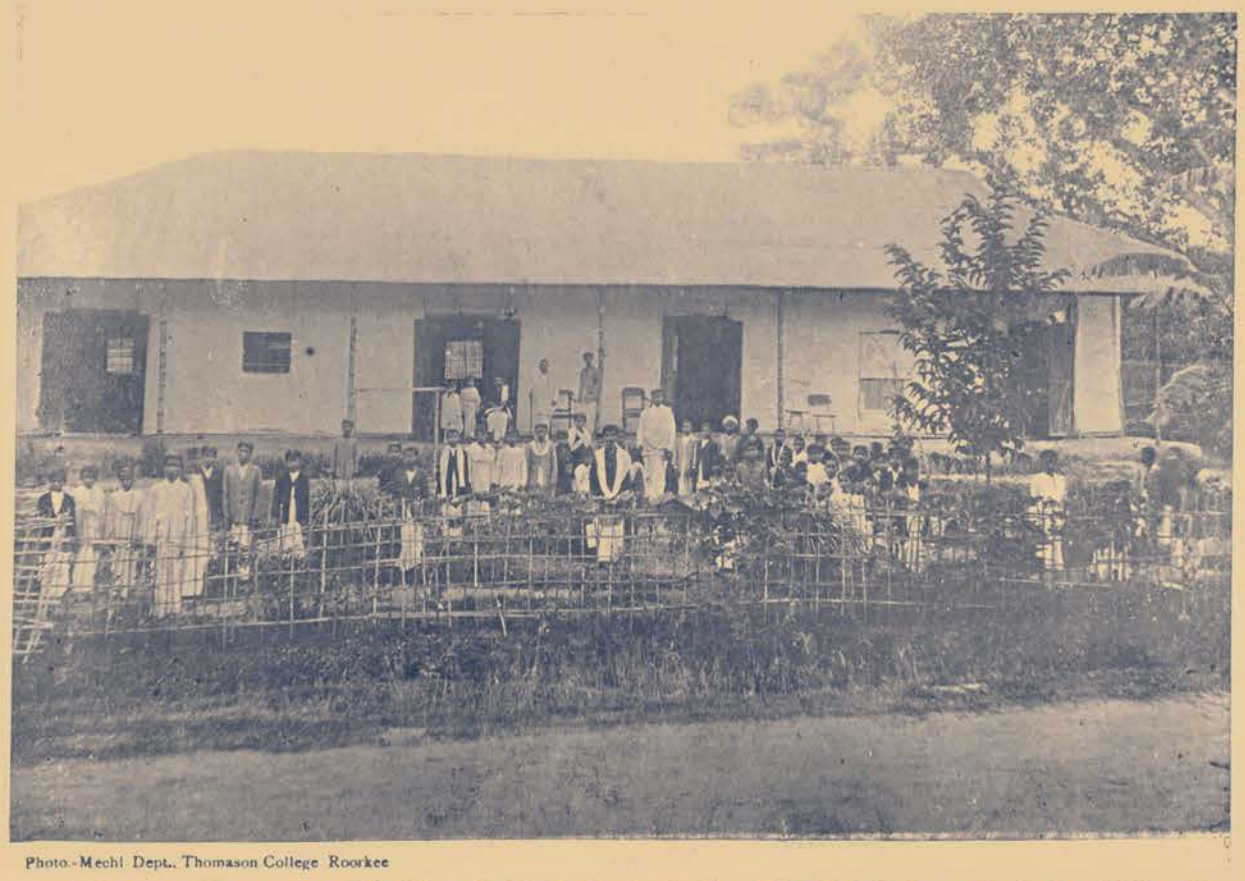


Photo.-Mechl Dept., Thomason College Roorkee

PARBATIA PRIMARY SCHOOL (SUPERIOR TYPE), JORHAT SUB—DIVISION (ASSAM).

MUNICIPAL HINDUSTANI SCHOOL, VIRAJPET (COORG).

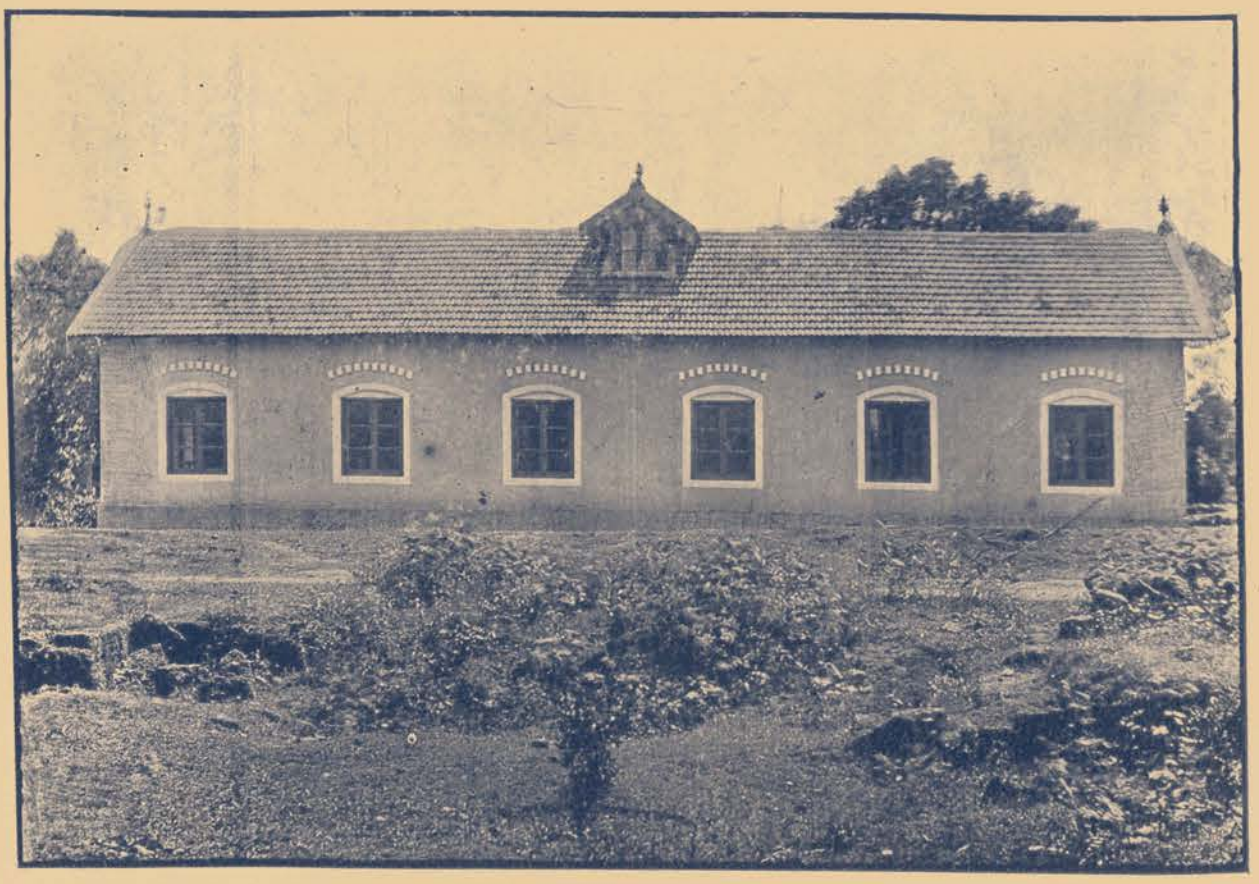


Photo. Mechl. Dept., Thomason College, Roorkee.

GOVERNMENT MODEL PRIMARY SCHOOL, VIRAJPET (COORG).

Photo.-Mechl. Dept., Thomason College, Roorkee.

LADY HARDINGE MEDICAL COLLEGE FOR WOMEN, DELHI.

WOMEN'S CHRISTIAN COLLEGE, MADRAS.

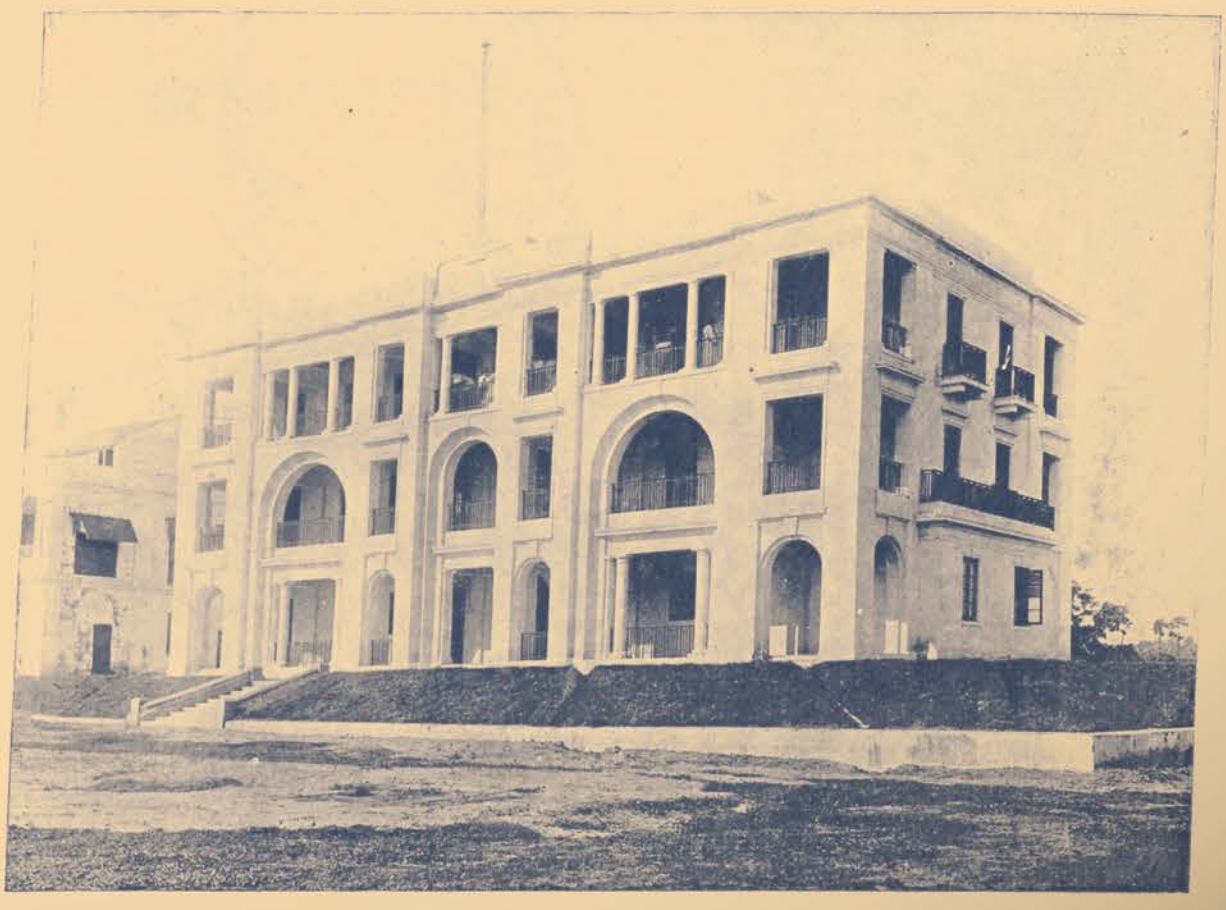


Photo.-Mechl. Dept., Thomason College, Roorkee.

MADRAS COLLEGE FOR WOMEN (HOSTEL), MADRAS.

R. C. FORT GIRLS' HIGH SCHOOL, TRICHINOPOLY (MADRAS).

Photo.-Mechl Depot., Thomason College, Roorkee.

KUNDANMAL GIRLS' SCHOOL, HYDERABAD, SIND (BOMBAY).

BRAHMO GIRLS' HIGH SCHOOL, CALCUTTA.

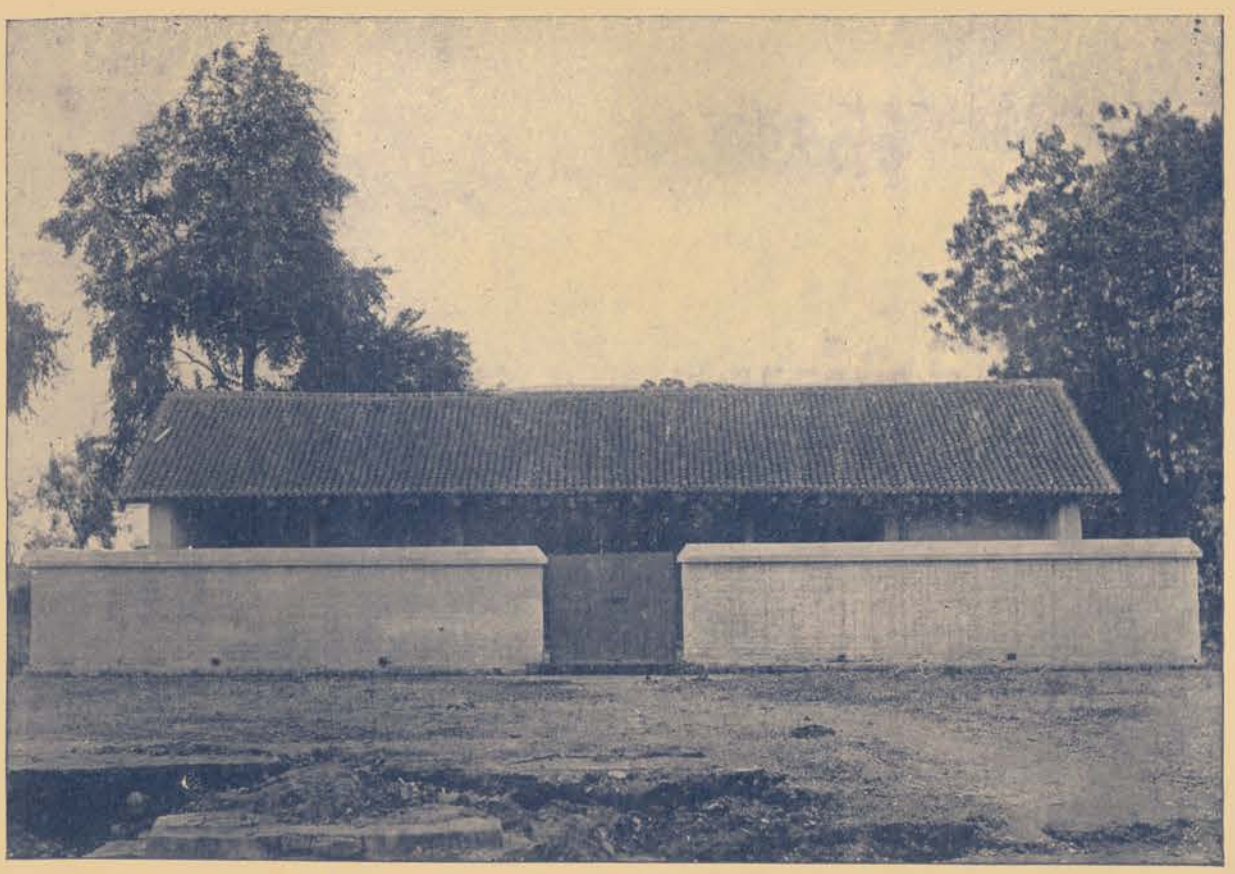


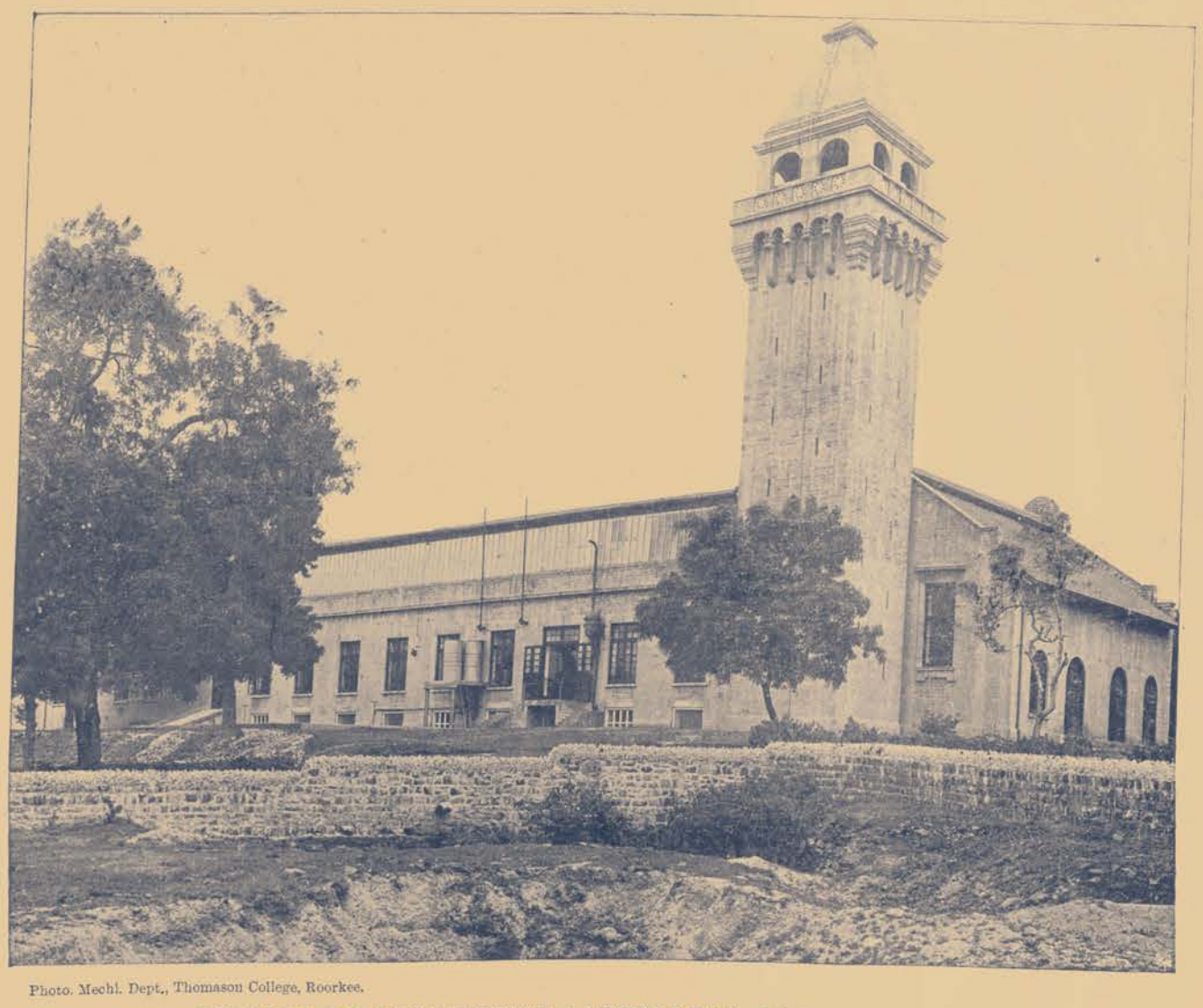
Photo.-Mechl. Dept., Thomason College, Roorkee.

GIRLS' SCHOOL, KAORIA, NARSINGHPUR DISTRICT (CENTRAL PROVINCES).

TRAINING COLLEGE, PATNA (BIHAR AND ORISSA).

Photo.-Mechl. Dept., Thomason College, Roorkee.

TRAINING SCHOOL FOR MUHAMMADAN TEACHERS, CUTTACK
(BIHAR AND ORISSA).



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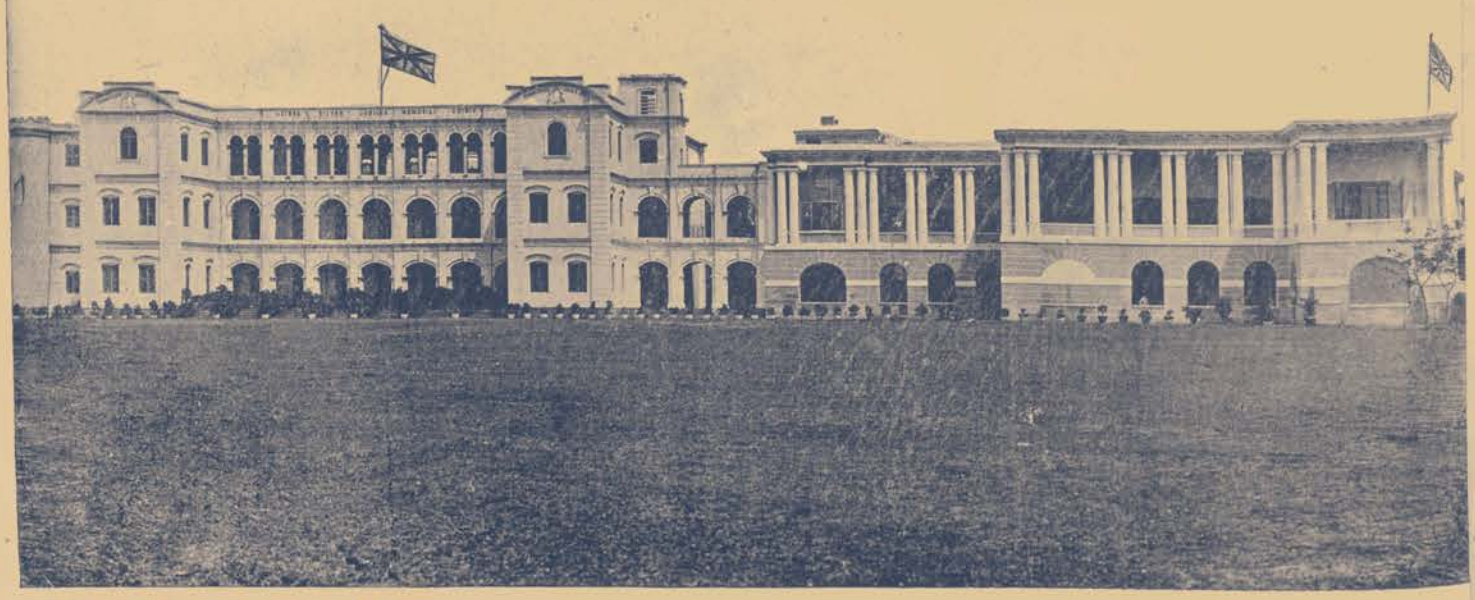
COLLEGE OF ENGINEERING LABORATORY, POONA (BOMBAY).



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ST. PATRICK'S HIGH SCHOOL, ADYAR (MADRAS).

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U. F. C. M. BOARDING & TRAINING SCHOOL, ROYAPURAM (MADRAS).

THE SCHOOL-ROOM, ST. PETER'S GIRLS' HIGH SCHOOL, KHANDALA (BOMBAY).

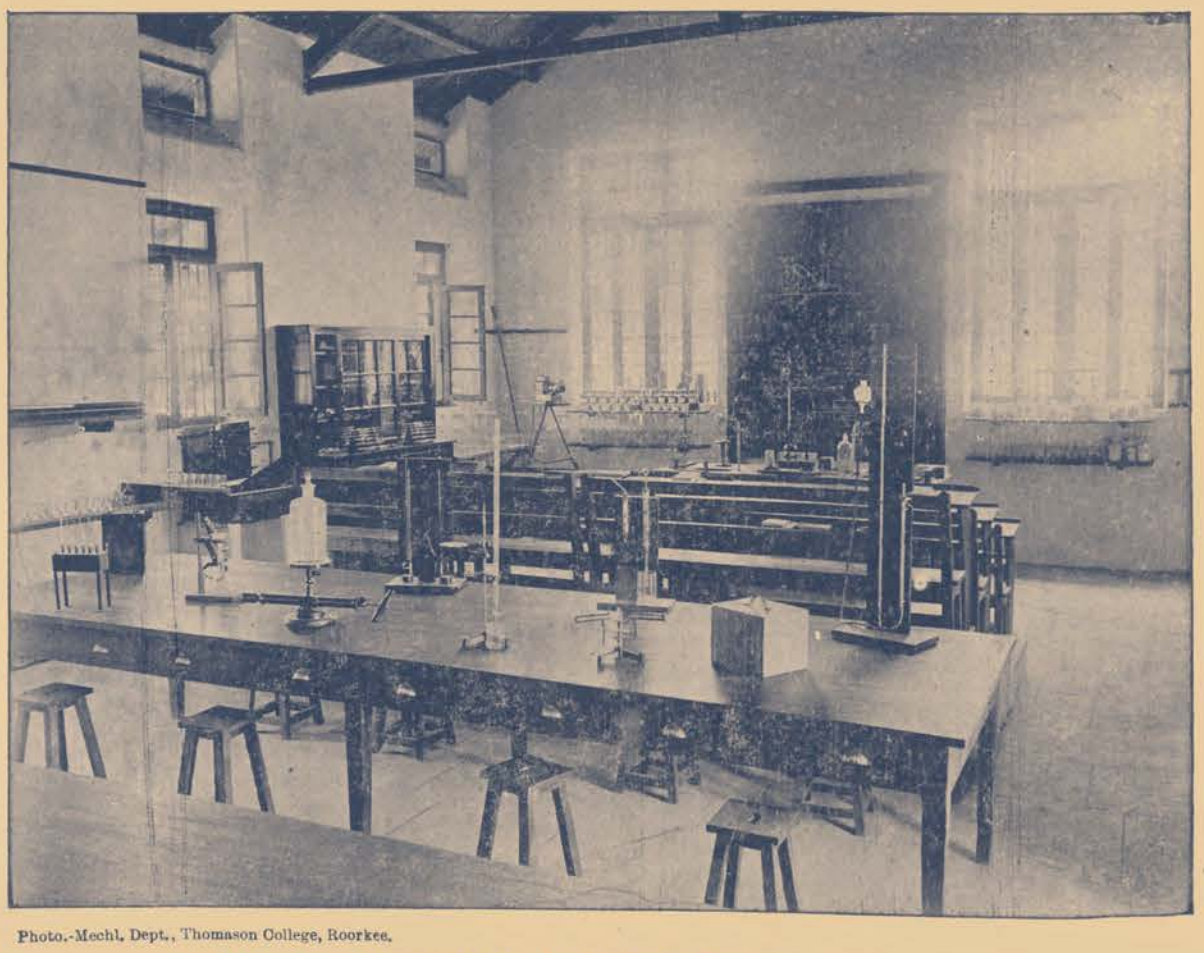
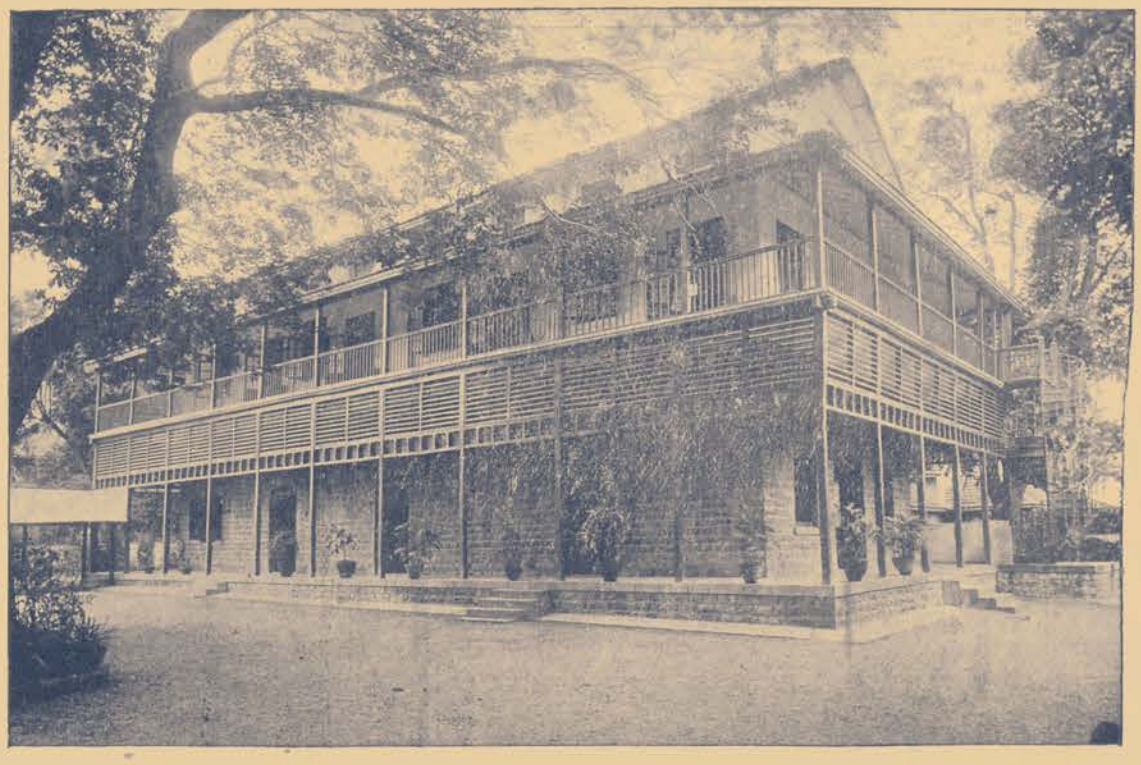


Photo.-Mechl. Dept., Thomason College, Roorkee.

BISHOP'S HIGH SCHOOL LABORATORY, POONA (BOMBAY).



CHILDREN'S NEW DORMITORY, CONVENT HIGH SCHOOL, POONA (BOMBAY).

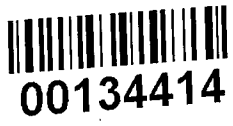
Photo.-Mechl. Dept., Thomason College, Roorkee.

ST. EDMUND'S COLLEGE, SHILLONG (ASSAM).

PINE MOUNT SCHOOL (EASTERN HALF). SHILLONG (ASSAM).

Photo.-Mechl. Dept., Thomason College, Roorkee.

/ PINE MOUNT SCHOOL (WESTERN HALF). SHILLONG (ASSAM).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Publications of the Bureau of Education, India.

Quinquennial Reviews.

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Progress of Education in India, 1907-12. Sixth Quinquennial Review. By H. Sharp, C.I.E., Vol. I, ₹4; Vol. II, ₹2.

Reports.

Report on the conference on the Education of the Domiciled Community in India, July 1912. ₹1.

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